Valedictory Address,

DELIVERED AT THE

PRESENTATION OF PRIZES AT THE ARMY MEDICAL SCHOOL AT NETLEY,

On August 2nd, 1889,

BY SIR DYCE DUCKWORTH, M.D.,

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GENTLEMEN,—It affords me much gratification to come amongst you and to bear a part in the ceremonial of to-day, and my thanks are due to the courtesy of my good friend the Director-General of your department, and the Senate of the Army Medical School, for the honour they do me in inviting me on this occasion. This is not my first visit to Netley. In 1866 I and a small party of friends had a narrow escape from a watery grave in front of this Royal Hospital, being all but capsized in a small sailing-boat. We landed here in a very drenched condition, and were at once taken care of by that great and good man whose name is, and ever will be, a talisman in this place, Dr. Edmund Parkes. I here and then first made his acquaintance, and I am proud to remember that I knew him in the flesh. About two years ago I had the honour of being present at a prize-giving ceremonial in this theatre, when my friend Sir Thomas Crawford directed your department. From my earliest student days I have always had a high regard for Netley, and for the excellent work done here both by its professors and pupils. I say without hesitation that this school has been one of the most valuable centres of medical, surgical, and hygienic training in the empire, and its benefits have radiated hence to all quarters of the globe, and been fruitful in numberless instances, as well to the civil as to the military communities they have reached. This is surely a strong assertion to make on behalf of any institution, but it cannot, I believe, be denied in respect of Netley. This school has been a model for others, and has excited admiration on the part of all who have appreciated its merits. When, therefore, I learned some time ago that it was in contemplation to curtail the advantages of this school, I confess that I was astonished. I could only account for such a proposal as the outcome of a spirit which is too prevalent in the present day—a spirit which is satisfied with nothing as it is, and which seeks to uproot and disturb everything for the mere sake of change, and in response to a restless phase of unphilosophical and purely experimental radicalism. I had thought that this school was rather undermanned, and needed, if anything, further development of its powers for usefulness. And now, I understand, the proposal is that those who would naturally come here to be trained for service in India should receive their training in that country. I know a good deal about students of medicine, having had to do with them for nearly thirty years. I have been in India, and know something of the conditions of life in that great dependency; and I form the opinion that such a plan as is proposed will prove little less than a failure. India is not a country in which Europeans can readily pursue with zeal and profit any line of study. I am well aware that this assertion can be instantly challenged, and the fruitful labours of men like Norman Chevers, Fayrer, Vandyke Carter, Lewis, Ewart, Cunningham, with many others in your department alone, be adduced in contradiction to it. While accepting this, I yet hold that the conditions under which the average young candidate would receive his training in India would be unfavourable, and the results distinctly less satisfactory than those which can be attained in this school.

Lest I should appear to be unmindful of the excellent work done in the universities and medical colleges of India, I would add that I fully appreciate this, and often wonder how so many of my countrymen can toil so untiringly and successfully under tropical conditions. I could better understand the necessity for the change proposed were it shown, which it has not been, that the training given here is inadequate, or that it could be conducted by better teachers, and with more complete equipment in any part of India. I can only express the hope, therefore, that your successors may long frequent these walls and find higher advantages, if possible, than you have done.

Since I was last here you have suffered two great losses in the persons of Dr. de Chaumont and Dr. David Boyes Smith. They were both friends and fellow-graduates of mine. It is not for me, here and now, to try to gauge the full measure of the loss to this school of two such men. I may add my humble testimony to the worth of each of them, and recall the solid scientific attainments of the one, recognised the world over wherever the subject of public health is studied; and remind you of the modesty, high-mindedness, and heroism of the other, whose merits were best known to those who knew him best, but whose noble spirit will long inspire his pupils and his brother officers. The examples and influence of men of such parts as these constitute enduring traditions for the school they served, and I would bid you to emulate their conduct and moral loftiness.

I must now offer you my congratulations on having completed your term of study here, and in particular add my commendation to those who have won honours in the school. Netley honours are not easy to secure; they can only testify to solid and good work, and I cannot doubt that here, as elsewhere, the officers who gain prizes will probably be amongst the best at a later period of their career. I say, advisedly, *amongst* the best, for nowhere is "the race always to the swift"; and I confess to some degree of shyness coming over me when I find myself in the presence of the man who carries off too many honours. I am rather afraid of that man. He is not always quite human, and in my experience he is not always the biggest man of his batch twenty years afterwards. In these terrible days of competition, a man must strike out vigorously, and put his back into any work he wishes to excel in; no harm comes of that. But there is a grasping spirit abroad which sets itself to gain everything, and goes so straightly to the goal that it loses a great deal of humanity and sweetness in the process. The professional prize-taker picks up his medals and books, and sits down again; but he is often rather alone with himself in his own little world, and may perchance have failed to cultivate and cement friendships, to develop his muscles and his agility, and in short to be quite the good "all-round" fellow he ought to be. This is a shocking heresy to utter at such a time, and in such a place, but I believe you would like me to say to you what I really think of these matters.

I have certain knowledge of the fact that competition, as such, has done much to injure the *camaraderie* in all the services it has been introduced into, and I am old-fashioned enough to believe in the *invincible* power of *camaraderie*, especially in our fighting departments. Hence, I have no doubt that some of the "passmen" of to-day will in the future do good and true service, and I suppose it is not beyond the bounds of probability that even in the person of one of them now before me I may be addressing a director-general of the future.

I congratulate you on taking service under the Crown. Most of you, I believe, will shortly proceed to India. Some of you are what I may term "seasoned" officers, and as you are the seniors, my remarks are for you in the first instance. The fact that you are here is itself much to your credit, and also shows wisdom on the part of the heads of the department. I can well understand your position. I had the honour to be an assistant surgeon in H.M. Navy at an early period of my career. I therefore know something of the delights of discipline, and of being in a position to do what one is told, and not what one likes. In the first few years of your service it is hardly possible for you to see much practice or to bear much responsibility. With increasing rank these come. But you naturally wish to furbish up your knowledge, and to know more and more of your professional business, to learn the newest methods of treatment, and to take part in carrying them out. Here you have every means for this at your disposal. Your presence here is also valuable for your juniors; but it has also, I hope, entailed upon you the responsibility of setting them high examples, and of attracting them to their duties and to the service they have chosen.

To those of you who will soon begin work in India I may well bid God speed. Your sphere will be full of novelty and interest in that great country. You will see the British soldier at his best, and take your respective parts in

that most marvellous accomplishment, the holding of the vast dependency of India, with its teeming millions, in the hands of a comparatively few thousands of trained troops. You, as part of that army, begin well, for you go out at an age when it is proper for an European to begin life in the tropics. It is a very different matter, as I fear you will soon learn, for an immature man to begin a man's work in India. I have had to do with five of the great railways in India for twenty-three years, and have, therefore, had some experience of the climatic and other influences of that country on Europeans of all ages. That experience compels me to affirm—and I do so in all seriousness, for it is a grave matter—that it is wrong to send a young man to do hard work in India until he is twenty-three years of age. My hospital experience has long since taught me that a large number of the recruits for the Queen's regiments enlist at the ages of sixteen and seventeen, and I have known lads of seventeen landed in India and reckoned as efficient soldiers. I have also known them come back again within eighteen months, used up and ruined in health. My experience, on the other hand, goes to show that after the age of twenty-three a man can do man's work in the tropics, and commonly ceases to be as vulnerable as he would have been in the six previous years. Those are very critical years in any young man's life. You will remember, for one thing, that the epiphyses of the bones are not firmly ossified till the age of twenty-two, and if development is not completed in the osseous system, we may fairly assume that it is still imperfect in other systems. In any case, the power of resisting endemic fever, solar influence, and enteric fever is greatly increased in the critical years I have mentioned, while at the same time there is often an attainment of greater moral stability. I say nothing as to the way in which such a waste of military power should be met. I know there are difficulties in securing and retaining matured soldiers, but your business and duty as guardians of the health of our troops compel you to make these mistakes known, and to persist in pointing out faults which come officially under your cognisance. Do you suppose that if these facts were known and appreciated by the tax-paying public, that the present wasteful system of sending to many immature soldiers to the tropics would be continued? You must never cry Peace when there is no peace.

India is the best country wherein to learn many things that you will require to know in military medical practice. All is real and "work-a-day," and you will find fewer "make-believes" there than at home. I suppose it is not too much to assert that but for our Indian military experience, our fighting capacity as a nation would be vastly inferior to that now possessed by us; and in using the expression fighting capacity of an army, I distinctly include the Medical Department, which always has formed, and will continue to form, one of the most important units of any aggressive or defensive force. Your department is probably not less perplexed with grievances than any other administrative one. I forbear to strike any notes to-day which may jar on the harmony which should prevail on such an occasion as brings us together, but I know that one *quæstio vexata* which much concerns you has lately been discussed before a Commission, and with the results of its deliberation we are not yet familiar. The points immediately concerned in this important question of rank relate, as I believe, exclusively to military matters, and hence the mass of the civilian profession is hardly qualified to form an opinion that should carry weight with it on such a subject. (Your brethren in civil life, however, are quite competent to appreciate such an indignity as had lately to be submitted to by some of your seniors in India, when the *insignia* of their position as members of the Viceroy's medical staff were taken from them. I trust to hear that this matter will soon be rectified.) The question I take to be important, because it concerns not only the comfort and peace of mind of the individual officers concerned, but also the harmonious working of our military forces, and, what is of greater moment, the sanitary welfare of the army. You have always sought and found, in any legitimate efforts, support from the profession at large, and this will assuredly not fail you now, if it should be needed. But I would utter a warning against agitations, and any but constitutional means of remedying grievances, if they exist. When I remind you that you are soldiers, I have in view the especial virtues of such men—viz., discipline and loyalty,—and, above all, their happy freedom from the petty thraldom of politics.

What the country has to look for in medico-military matters is perfect efficiency, and the endeavour to secure that knows, and shall know, no end. The question arises here whether the modern conditions of your department secure the best medical attendance for the officers, rank and file, and all persons belonging to an individual regiment. I understand that your arrangements are adapted with a view to war time, and not to meet the wants of a state of peace. As, happily, our troops are more engaged in keeping the peace than in making war, it is a fair question to ask whether the old system of regimental surgeons is rightly done away with. I have been led to form the opinion that it was a mistake to detach medical officers from, at all events, some continuity of service with regiments, and I venture to state that I think it would be well if one or two surgeons were definitely attached for a term of years to each regiment. The advantages of this plan are at once obvious, and I conceive that it might be carried out without any violent dislocation of existing arrangements. In war time surgeons are attached to regiments, but they then do not know the men, and the men do not know the surgeon. It is impossible to work both in quarters and in the field on a Procrustean system, and we must not look for guidance in this matter to the military services of other countries, inasmuch as no other army is called on for such varied duties and experiences as our own.

I regret to find that the military authorities are beginning to call on civilian members of the profession to do military medical work for them. I fail to see the necessity of such a proceeding. There can be, and there ought to be, no difficulty in finding trained officers to do this work, and if such are ready to act, I consider it unfair to pass them by.

I believe that young men who now enter either the Army Medical Department or the Indian branch of it are to be congratulated on the careers they have selected. The "plums" of private practice in civil life are now none too many. Our profession is, in fact, overstocked, and the strife to gain a living in it is very great. Competition is now so keen that some of our humbler brethren are compelled to undertake duties entailing anxiety and serious responsibility for the most miserable remuneration. In times of commercial depression young men are wont to resort to our profession, and so, of late years, our ranks have been preternaturally filled. Happily, this source of supply has now ceased to run. In my opinion, the most wholesome checks on over-admission to our ranks will be found in the institution of higher entrance examinations, and in the prolongation of the curriculum of study from four to a minimum of five years, the last year being mainly devoted to clinical work. Amongst the peculiar advantages of your position are, that you see much of the world, and may thus become in the best sense men of the world; that you have leisure for higher mental cultivation if you will avail yourselves of it; and that after twenty years' service you can retire with a pension, still young men, and take up your profession in civil life, with excellent chances of advancement. Not many men at the age of forty-two can make a fresh start in life with an equipment so solid in all respects as yours may be at that time. I maintain that with such prospects the career you have chosen is a very desirable one, and should attract some of the choicest men from every great school of medicine.

Of your teachers here it would ill become me to speak. The names of many of them, past and present, are household words in our profession. I know that your department as a whole venerates them, and you best of all know the worth of those who have so lately guided your studies. For myself, I can only say that I should count myself happy to sit at the feet of Maclean, of Longmore, and of Aitken, and to imbibe not only the lore they could infuse into me, but also some of the sterling qualities and graces that they bear aloft so well. It is for you to run with, and carry on to others, the torches of knowledge which they have put into your hands.

I take this opportunity, which seldom comes to one in my position, of making a few remarks before military surgeons on the subject of the abolition of the Contagious Diseases Acts. I regret to think that you will soon have sad experience of the unwisdom of that measure. You and I are young enough to hope to see those Acts restored to their place on the statute book. That they were ever repealed testifies to a degree the ignorance and folly that we, as a people, should be ashamed of. We can but regret and pity the want of resolution and firmness in those who control the affairs of the nation, and who find themselves charged with the

power to govern, but unable to fulfil the office of a government, yielding to sensational clamour, and letting loose again a plague that we had in great measure controlled. Many hard words have been uttered in this noisome controversy; but remember that "hard words break no bones." You who agree with me, and who have the best right to your opinions, know, or soon will know, too well how grievous is the havoc wrought by the undoing of this legislation. We care not for any amount of obloquy that may be uttered against us for denouncing this folly, and we must not cease to declaim vigorously against it. It is almost grotesque to watch the undulations and inconsistencies of public opinion in respect of contagious diseases. A few days since the inhabitants of London were scared by the discovery of a solitary, and practically harmless, leper in the community; but the five millions of the metropolis are quite unconcerned in the presence of perhaps twenty thousand or more persons suffering from all forms of distinctly contagious syphilis. That is of no consequence, I suppose. Not only for the navy and the army, but for every city, town, and community, should a Contagious Diseases Act be passed. That is the logical claim forced on us as physicians and guardians of the public health, and we urge it no less in our capacity both as Christian men and loyal citizens. It is very satisfactory to learn that the new local governing body in Malta have at once restored these Acts, and are enforcing them with much benefit to the garrison and the town of Valetta.

Gentlemen, it is one of the penalties of venturing to think and act for yourself that you are often alone and exposed to obloquy and misapprehension. It is not a popular course to follow, but popularity is, after all, a very poor thing. Our duty in all the concerns of life is to do what we believe to be right, and to submit to any consequences. I have detained you too long. In conclusion I have only to express my best wishes for the career of each one of you. Your position is already a very enviable one. You have a splendid sphere of duty. You will go out to see England beyond the seas. You will come in contact with some of the best men who are doing their best work. You will aid your country in maintaining in vigour her right to govern other nations; you will, I feel sure, carry everywhere with you the traditions, not only of this great school, but of your respective universities and medical colleges; you will dispense to others the blessings you have learned to value in our common mother country; you will always think and act as educated British gentlemen; and you will, I hope, earn fresh laurels for medicine, and especially for that branch of it you are now so well-fitted to represent. Let me urge you in particular to cultivate firmness and dependability of character, qualities which are quite consistent with the graces of modesty, tact, and good temper. Success in any calling is as much, if not more, a matter of personality as of great accomplishments. In your profession, above all, duty has the first claim, and all else must bend before it. "He who serves best afterwards rules best." And you will, I hope, not learn to ignore or despise sentiment. I have been speaking of sentiment already, but I then alluded to mawkish and hysterical sentiment. None of that, if you please. But in matters military, medical, and otherwise, there are, and ever will be, true and noble sentiments. Yes, gentlemen, there is a sentiment in a button, in a badge, in a monogram, and in a facing; there is a sentiment in a reminiscence; you know it already, you will soon know it better; and any one of these, or of a hundred other like things, may come in a moment to nerve you to face an ugly duty, to shun an evil course, to set a bold example, or, if need be, even to meet the death-stroke of a hero. *Vale!* And to each one of you I add, "*quod felix, faustumque sit!*"

EPSOM COLLEGE. — Mr. France has presented another Female Scholarship at St. Anne's School to the Council of Epsom College. This is the sixth scholarship he has purchased. Mr. France is doing good with both hands. With the one he gives a large sum of money to a most deserving institution, with the other he enables the members of the council of the College to give in perpetuity a first-rate education, free of all charge, to six girls, the orphan daughters of medical men.—Lucas, Mair, Norman, Barron, Griffiths, and Hardcastle, pupils of Epsom College, have all passed in the first Division at the Matriculation examination of the University of London.

Remarks
ON
PROFESSOR BURDON SANDERSON'S THEORY OF ASPHYXIA.

BY GEORGE JOHNSON, M.D., F.R.S.

IN my recently published Essay on Asphyxia I have suggested as a probable explanation of Dr. Burdon Sanderson's statement that both sides of the heart are equally distended immediately after death from apnœa, that such a result might be brought about by a dose of curara sufficiently in excess to paralyse the vaso-motor nerves and the arterioles.

Since the publication of the essay in question I have read Dr. Sanderson's Croonian lecture on the "Influence exerted by the Movements of Respiration on the Circulation of the Blood,"[1] and also the abstract of the same lecture in the Proceedings of the Royal Society, 1867. In the lecture, at p. 586, the results of experiments with woorara[2] upon four dogs are described, and it is stated that "in the two last experiments the quantity used corresponded to one-tenth of a gramme of solid woorara."

Dr. Rutherford, in his lecture on the Circulation,[3] says that "the dose of curara should be just sufficient to paralyse the voluntary muscles; if the dose be excessive, the vaso-motor nerves are also paralysed. The amount given should be six milligrammes for a rabbit in winter and three milligrammes in summer; twelve milligrammes for a small dog and eighteen milligrammes for a large one."

Dr. Sanderson's dose of one-tenth of a gramme, which is, in other words, one hundred milligrammes, was more than five times the amount which Dr. Rutherford employs for a large dog. It is not, therefore, surprising that the results obtained by these two experimenters should be contradictory.

Dr. Sanderson attributes the increased systemic arterial pressure which occurs during the first stage of apnœa to the violent respiratory efforts. He says:[4] "It may be concluded that the extraordinary elevation of arterial pressure which has been long known to occur during the second minute in death from apnœa is not due, as was supposed by Dr. Alison and Dr. John Ried, to obstruction of the capillary vessels, either pulmonary or systemic, but to the violence of the respiratory efforts. The cavity of the chest being closed, the force exercised by the respiratory muscles expresses itself in variations of tension of the enclosed air, which are communicated through the intra-thoracic arteries to those outside of the chest, producing those violent oscillations of the dynamometer which have been referred to. In support of this inference, it was shown that in an animal under the influence of woorara (when all respiratory movement ceases while those of the heart are unaffected), the process of apnœa is not only of greater duration, but is not attended with any of those greater disturbances of the circulation which have been hitherto attributed to capillary obstruction. The gradual extinction of the force of the contraction of the heart is indicated by a slow and uninterrupted subsidence of the arterial pressure."

Now, in justice to Dr. Reid, I maintain that no one can have carefully read his most interesting and instructive paper on the "Order of Succession in which the Vital Actions are arrested in Asphyxia" without perceiving that he clearly distinguished between the steady increase of arterial pressure resulting from the impeded transit of unaerated blood through the minute systemic vessels and the greater paroxysmal increase which he correctly attributed to the violent respiratory movements and struggles of the animal.[5]

If Dr. Reid's experiments left any doubt as to the existence of increased arterial pressure easily distinguishable from that caused by the struggles of the animal, Mr. Erichsen's[6] carefully conducted experiments upon animals in which muscular movements were annihilated by pithing should suffice to convince the most sceptical. In

[1] Philosophical Transactions, 1867. [2] Another name for curara.
[3] THE LANCET, Feb. 17th, 1872, p. 213. [4] Abstract, p. 393.
[5] See pp. 39 to 41 of his Physiological, Anatomical, and Pathological Researches. [6] Edinburgh Medical and Surgical Journal, 1845.

one experiment, after artificial respiration had been suspended, Mr. Erichsen found that the mercury in the dynamometer, which had stood at from 3½ in. to 4 in., rose to from 5⅞ in. to 6½ in., at which it stood for about two minutes. In another experiment the mercury rose from between 3½ in. and 4½ in. to 6½ in. and 6⅞ in. In a third experiment the mercury rose 2 in. or 2½ in. above the level at which it stood when inflation of the lungs was suspended.

These experiments should have sufficed to place beyond all controversy the accuracy of Dr. Reid's original statement, that, contrary to his own preconceived idea, there is, for a period of about two minutes after respiration has ceased, an increase of systemic arterial tension and pressure, the result of an impediment to the passage of unaerated blood through the terminal systemic vessels.

Dr. Rutherford's experiments upon a dog paralysed by a moderate dose of curara and with the chest and pericardium opened, have shown that with the increased systemic arterial tension during the first stage of apnœa, the pressure within the left cavities of the heart is so great as to distend them to an inordinate degree. Now that we have proof of the excessive dose of curara employed by Dr. Sanderson, we can understand the discrepancy between his results and those of other observers. The vaso-motor nerves, both pulmonary and systemic, being paralysed, the regulating and controlling power of the arterioles is annihilated, there is no increase of pressure in the systemic arterioles, therefore no distension of the left cavities of the heart. "The process of apnœa is of greater duration," for the reason that the pulmonary arterioles being paralysed, have lost the power of arresting the flow of blood through the lungs. The apnœal process is therefore prolonged, as it is in newly born animals with a patulous foramen ovale, which allows the blood to pass directly from the right to the left side of the heart, and thus to evade the controlling influence of the pulmonary arterioles. The amount of blood on the two sides of the heart after death is therefore equal, or nearly so; and, as Dr. Sanderson says, "the gradual extinction of the force of the contraction of the heart is indicated by a slow and uninterrupted subsidence of the arterial pressure."

The vaso-motor paralysis resulting from an over-dose of curara is so far instructive that it affords confirmatory evidence that the early systemic and the later pulmonic obstruction during the progress of apnœa are results of contraction of the arterioles. For this indirect proof of the influence which the unparalysed arterioles exert upon the circulation during the successive stages of apnœa we are indebted to Dr. Sanderson's experiments with excessive doses of curara; but, unfortunately, the entirely exceptional condition thus induced has led Dr. Sanderson to contradict the statements of Dr. Alison, Dr. John Reid, and many other accurate observers, and to attempt the revival of the antiquated theory of Bichat, which assumes that the immediate cause of death from apnœa (asphyxia) is not the arrest of the pulmonary circulation, but cardiac paralysis, consequent on the circulation of venous blood through the coronary vessels—a theory which, in my essay on asphyxia, I have proved to be inconsistent with indisputable facts. Before the publication of my essay, I had carefully studied Dr. Sanderson's chapter on Respiration in the "Handbook for the Physiological Laboratory," but I had not read his Croonian lecture at the Royal Society, and therefore, not knowing what dose of curara he had employed, I could only surmise that his exceptional results were due to vaso-motor paralysis caused by excessive doses of the poison. That this is the true and complete explanation of the facts has now, I think, been conclusively proved.

SYMPATHY WITH A FALSELY-ACCUSED SURGEON.—On the 30th ult., a dinner was given at Edmonton, attended by fifty gentlemen (many of whom were professional friends), to Mr. W. Jones, L.R.C.P., L.R.C.S.Edin., of Upper Edmonton, as an expression of sympathy on the trying circumstances to which he had been subjected by a recent prosecution on a cruel and grave charge preferred against him, and tried at the Central Criminal Court, of which he was completely acquitted, and left the court without a stain upon his character. A fund is being raised to defray the legal expenses incurred by Mr. Jones in meeting the groundless charge, and the present result of the effort is given in another column (page 300).

A CASE OF

PAROXYSMAL HÆMOGLOBINURIA WITH EXPERIMENTAL OBSERVATIONS AND REMARKS.[1]

BY JOHN S. BRISTOWE, M.D.,
AND
S. MONCKTON COPEMAN, M.A., M.B.

[*Note.*—The following paper has been written by myself and in the first person, mainly because I found it more convenient to write it in that form. It is essentially, however, the joint production of Dr. Copeman and myself. I was anxious that an experimental investigation of the case should be made, and asked Dr. Copeman to carry out my views. The nature of the experiments to be performed, and the object for which they were performed, were matters of constant discussion between us. But the actual experiments (the account of which forms the great bulk of the paper, and nearly all that is interesting in it) were performed by Dr. Copeman alone. The concluding remarks represent our joint opinions.—J. S. B.]

James G——, an omnibus conductor, aged forty-one, was admitted under my care on Jan. 3rd. He had had syphilis twenty years previously, followed by a secondary eruption, but otherwise had had good health down to January, 1886. He had never had rheumatism or ague. He is a native of London. In the winter of 1885-86 he began to suffer from coldness of the extremities and from occasional "dying" of the fingers; and in January he was attacked with what was supposed to be frost-bite of the middle three toes of the right foot and all the toes of the left. He was treated for this affection in the London Hospital, where he remained about six weeks. During this time he lost the nails of the affected toes. He remained fairly well during the following summer; but during the winter months of 1886-87 he suffered, whenever he was exposed to cold, from coldness of the extremities, often attended with "dying" of the fingers, shivering, and headache, and followed by the discharge of thick, porter-like urine. He complained also of pain or difficulty in swallowing, and was often told that he was becoming jaundiced. In each succeeding summer he enjoyed good health; in each succeeding winter his malady recurred. Dr. Acland sent him into the hospital just as an attack was passing off.

The patient was a fairly well-nourished man, with a pale sallow complexion, but some rosiness of cheeks, due to persistent capillary enlargement. The sclerotics were slightly yellow. There was no evidence of disease either in the thoracic or in the abdominal organs. His tongue was clean; his appetite good; his bowels confined; his pulse 60, regular; his temperature normal. His urine had a specific gravity of 1018, was dark-coloured, clear, acid, contained a little albumen, and gave a blue colour with guaiacum and ozonised ether. The next day it was normal.

Excepting that the man remained somewhat anæmic and sallow, that when washing in cold water his fingers (mainly the second, third, and fourth) were apt to "die," and that he occasionally suffered from uneasiness after food and from nausea, he continued for the next ten days in good health. The equable temperature of the ward evidently agreed with him. Instead, however, of discharging him, and thus ensuring for him the frequent recurrence of his attacks, I determined, with his sanction, to keep him in the hospital for some time, and to perform a few experiments upon him, with the object of investigating the nature of his malady. As his clinical history in the hospital is practically only a record of these experiments, conducted by my friend Dr. Copeman, I will limit my notes of his case to them almost exclusively.

EXP. 1 (Jan. 14th).—He went, well wrapped up, between 10 and 11 A.M., for a three-quarters of an hour's walk on the hospital terrace. The morning was not very cold, but on his return he was cold and bluish, and shivered for about an hour, even though he sat over a warm fire. His hands generally were livid, and seemed somewhat swollen, and the second, third, and fourth fingers were cold and white. His feet also were very cold, but to the eye presented nothing

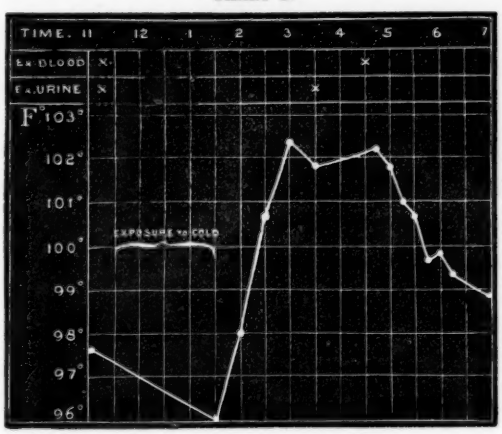
[1] Read before the Medical Society of London, April 29th, 1889.

remarkable. His throat felt swollen, and it was painful to swallow; and he had a feeling of "pins and needles" in the tip of his tongue. He lost his appetite during the day, and consequently took no dinner. At 12 his temperature had risen to 101°, at 4 it was 100·2°, and at 8 in the evening 98°. The urine passed before his exposure had a specific gravity of 1013, was pale, clear, and free from albumen; that passed two hours after his exposure had a specific gravity of 1020, was of a dark reddish-brown colour, depositing an abundant sediment, highly albuminous and acid, and presented all the usual chemical and microscopic characters observed in cases of hæmoglobinuria. The evening's urine was the same in quality, but contained considerably less hæmoglobin; and that passed in the course of the night still presented slight traces of blood-colouring matter. The next day he was in his usual health; but his blood, examined with the microscope, showed little tendency in the corpuscles to form rouleaux, and these bodies to be generally crenated or otherwise misshapen.

EXP. 2 (Jan. 17th).—The patient went out on to the terrace at 9.30 A.M., and remained out until 11.30. The morning was not cold, and, although on his return to the ward he looked chilly, he did not shiver or feel ill. Nevertheless, the temperature had risen to 100° by 2.30 P.M., and he had a marked attack of hæmoglobinuria. The sample of urine passed two hours and a half after his return was acid, had a specific gravity of 1024, and contained a large quantity of hæmoglobin; that passed in the evening had a specific gravity of 1010, was acid, contained albumen, had a distinct red tinge, and gave the guaiacum reaction. A drop of blood was removed from the finger late in the evening and gave the following results: "Examination with the hæmocytometer showed that, although the colour of the blood did not appear to be greatly lessened, the number of corpuscles was very small, there being only about 2,760,000 in the cubic millimetre, instead of about 5,000,000, the normal number. The colour of the individual corpuscles was quite up to the normal, but there was much variety in shape and size, some having almost twice the diameter of others, and there was only a slight attempt at the formation of rouleaux. The blood-platelets were increased in number, and here and there, floating in the liquor sanguinis, were irregular granular masses of pigment, probably hæmatin. The specific gravity of the blood was rather low, being 1047."

EXP. 3 (Jan. 23rd).—The patient went out for a walk at 11.30 A.M. and remained out till 1.30 P.M. The day was

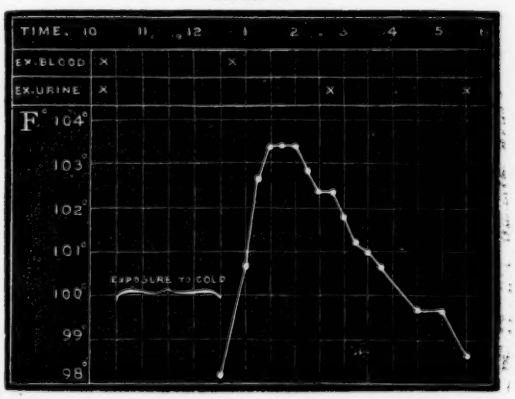
CHART 1.



mild and rather foggy, and, so far as his feelings were concerned, the exposure had no injurious influence over him. He did not shiver. His temperature before going out and on his return was subnormal. At 2 P.M. it was still only 98°. At 2.30 P.M., however, it was 100·6°; at 3 P.M. 102·4°; and at 4.45 P.M. still 102·4°. After this it gradually fell, being at 7 P.M. 98·8°, and at 8 P.M. 98·2°. The patient's urine before going out had a specific gravity of 1029, was acid, and free from albumen and blood. The next specimen, passed at 3.30 P.M., was of specific gravity 1024, acid, of the colour of dark-brown sherry, and contained hæmoglobin. A specimen passed at 10 P.M. was perfectly normal, and had a specific gravity of 1013. The blood was examined both before and after the walk, and the following is the report concerning it: "Before exercise it was noticed that the patient did not seem nearly so anæmic as he was at the time of the last observation, and this was borne out by the fact that the corpuscles, as estimated by the hæmocytometer, amounted to 3,665,000 in the cubic millimetre. The corpuscles did not form perfect rouleaux, and varied somewhat in size; but their colour appeared to be normal. At 4.30 P.M. the blood was again examined. The number of corpuscles in a cubic millimetre had fallen to 2,970,000. There was no attempt at the formation of rouleaux, and many of the corpuscles no longer retained their circular form. Floating in the plasma were seen masses of amorphous hæmatin, and here and there small colourless crystals, with pointed ends, resembling the proteid crystals described by Charcot. The specific gravity of the blood had fallen about 5 degrees. (See Chart 1.)

EXP. 4 (Feb. 5th).—The patient took a walk on the terrace from 10.30 A.M. till 12.20. The morning was cold. A specimen of urine passed before exposure was normal. The blood also was examined, and found to contain 3,612,500 red corpuscles in the cubic millimetre. Before going out his temperature was subnormal. Immediately on his return it was 98·2°, and he had a rigor. The temperature then rapidly rose, and by 1.30 P.M. attained its maximum of 103·4°, at which it stood for the next half-hour. It then slowly fell, and had reached the normal at 5 30 P.M. At 2 45 P.M. the first specimen of urine after his exposure was passed, and at 5.30 P.M. another. Both of these were of a dark reddish-brown colour and typical specimens of the urine of hæmoglobinuria. When diluted and examined with the spectroscope, they showed the bands characteristic of acid hæmatin. The next specimen passed was unfortunately lost; while a yet later one gave no bands when examined spectroscopically. The blood examined after exposure contained only 2,930,000 red corpuscles per cubic millimetre. The hæmoglobin power of its individual corpuscles, which before exposure seemed normal, appeared afterwards to be somewhat, though very slightly, lessened. The plasma was slightly tinted, and granular masses of hæmatin were seen floating in it. After the lapse of some hours minute crystals of hæmoglobin appeared in the blood, which had been mounted for microscopic observation. On the 11th (six days later) the blood was again examined, when the red corpuscles were found

CHART 2.

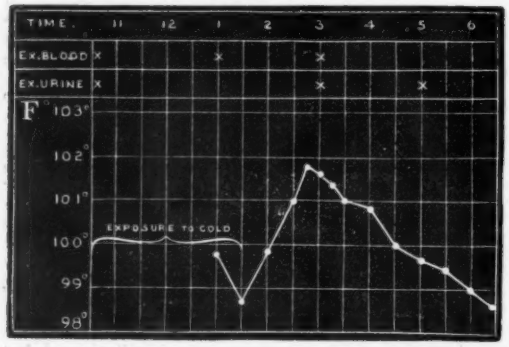


to have risen to 3,540,000 per cubic millimetre. (See Chart 2.)

EXP. 5 (Feb. 15th).—The patient went out for a walk from 10.30 A.M. until nearly 1 P.M. The day was not cold, and the results were less marked than usual. The temperature and the urine were normal before the experiment, and the blood had a specific gravity of 1051⅞ and 3,270,000 corpuscles in the cubic centimetre, which bodies had their natural colour and shape, though varying much in size, some having twice the diameter of others. At 12.55 he was somewhat chilly, and his temperature 99·7°; the blood had a specific gravity of 1050⅜; the number of red corpuscles had fallen to 2,970,000 per cubic millimetre; their consistency had become impaired, as was shown by the abnormal shapes.

of many; and here and there were reddish-brown granular masses of hæmatin. At 3 P.M., at which time his temperature was 101·6°, the corpuscles had further fallen to 2,890,000. Specimens of urine passed at 3 and 5 P.M. respectively presented the usual character, and, as on former occasions, gave evidence of the presence of acid hæmatin in addition to hæmoglobin A third specimen passed at 9 P.M., when his temperature had fallen to 97 6°, presented a slight reddish-yellow tinge and no deposit; but it gave the guaiacum reaction; and, on spectroscopic examination of a layer half an inch in thickness, revealed no bands; but on similar examination of a layer two inches thick, two faint

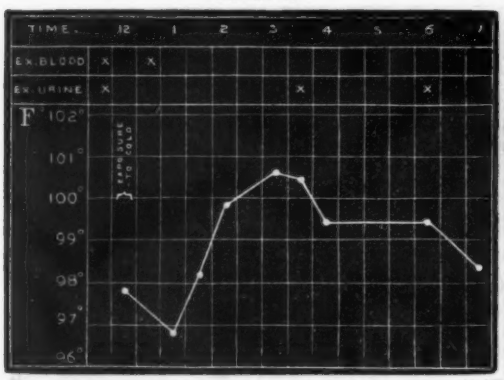
CHART 3.



bands, apparently of oxy-hæmoglobin, were seen. The temperature on this occasion began to rise a little before 2 P.M.; it attained its highest point, 101·8°, by 2.45 P.M., and had fallen to 99° by 6 P.M. On Feb. 19th (four days later) the blood-corpuscles had risen to 3,450,000 in the cubic millimetre, and the hæmoglobin power was nearly normal. (See Chart 3.)

EXP. 6 (March 2nd).—At noon the patient placed his hands in iced water, and kept them there for about ten minutes. The hands became white, "dead," and he had a slight rigor. At 12.30 they were mottled, white and red, and still felt cold to the touch. His temperature before immersion of the hands was 97·8°. At 1 o'clock it had sunk to 96·8°. From 3 P.M. to 3 30 P.M. it lay between

CHART 4.

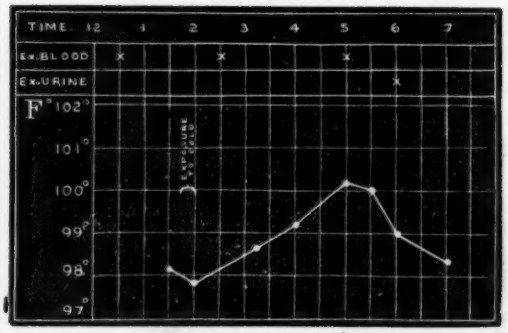


100° and 101°; and by 7 P.M it had become normal. The blood, examined before the experiment, contained 3,765,000 red corpuscles in the cubic millimetre, and its hæmoglobin power was 39 per cent. of normal. A little after 12.30, the corpuscles had fallen to 3,636 000, the percentage of hæmoglobin remaining unaltered. The specimens of urine passed during the day were examined the following morning. Specimen 1, passed at 3 30 P.M., when his temperature was 100·4°, had a specific gravity of 1014, was acid, of a fairly deep reddish-brown hue, and presented a very slight deposit, which showed under the microscope a large quantity of amorphous pigment and a few white corpuscles, but no red corpuscles or oxalates. It contained one-sixth of albumen. The spectroscope showed the bands of acid hæmatin. Specimen 2, passed at 6 P.M., when his temperature was 99·4°, had a specific gravity of 1012, was acid, of a clear straw colour, with a rather darkly-coloured deposit of mucus, in which were found a few granules and leucocytes. The guaiacum test gave a faint blue colour, but no bands were seen on spectroscopic examination. The third specimen, passed at 7.30 P.M., was clear, acid, sp. gr. 1010, and was without deposit, but gave the guaiacum reaction. Specimen 6, passed at 9 P.M., was clear, almost colourless, sp. gr. 1007, acid, and without reaction to guaiacum. (See Chart 4.)

EXP. 7 (March 2nd).—In the evening of the same day, at 7.30 P.M., an elastic band was fastened round the base of one finger, which was then immersed in iced water for a quarter of an hour, after which a drop of blood was removed from the finger and examined under the microscope. There was no attempt at the formation of rouleaux by the red corpuscles, which had nearly all lost their normal shape. Here and there three or four appeared to have become fused together; and some were almost completely colourless from loss of their hæmoglobin, while the surrounding plasma was deeply tinged with pink. The blood taken at the same time from one of his other fingers was in what, for him, may be termed the normal condition. A similar experiment performed on a healthy person caused no obvious change in the blood of the ligatured and cooled finger.[2]

EXP. 8 (March 7th).—It was objected to the last experiment but one—that in which the patient's hands were immersed in cold water—that the hæmoglobinuria might have been due not so much to the experiment as to the fact that (the day being cold) he was exposed to the general influence of cold in going from the ward to the physiological laboratory. It was determined, therefore, that the experiment should be repeated, the patient remaining all the time in the ward. At 12.30 P.M. the blood was examined, when it was found that the red corpuscles numbered 3,433,300 in the cubic millimetre, and the hæmoglobin power was 36 per cent. Fair rouleaux were formed, and the corpuscles were well shaped, though of various sizes. At 1.45 he again placed his hands in iced water. They were not kept immersed quite so long as on the former

CHART 5.

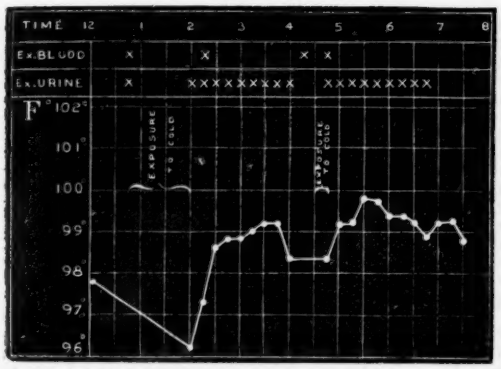


occasion. The day was warm. On being taken out of the water the hands were mottled and felt very cold. His temperature was normal at the time of the experiment. At 2 P.M. it was 97 8°, from which time it slowly rose, until at 5 P.M. it had attained its maximum, 100·2°. It had become normal by 7 P.M. At 2.30 the blood was re-examined. The red corpuscles had then fallen to 2,984,000, while the hæmoglobin power had only fallen by 1°, or at most 2°. No rouleaux were formed, but some abnormally shaped and decolourised corpuscles were seen. At this time the patient complained of pain across the loins, and later in the afternoon of difficulty in swallowing. Laryngeal inspection revealed nothing amiss, with the exception that the epiglottis was very anæmic. At 5 P.M. the blood was once more examined. The red corpuscles had been to a great extent replaced, and now numbered 3,366,000 in the cubic millimetre, but amorphous pigment was still seen in the plasma. The first urine after the experiment was passed at 6 P.M. It was of a brown-red colour, without sediment, and gave with the spectroscope the bands of acid hæmatin. A second specimen, passed a few hours later, presented no bands, but gave a faint guaiacum reaction. The third specimen was normal. (See Chart 5.)

[2] Ehrlich and Boas have both performed similar experiments, tending to show that the injurious action of cold is purely local.

EXP. 9 (March 18th).—On this day the experiment was made with the special object of determining the condition of the urine at short intervals. At 12.45, at which time his temperature was 97·8° and his urine normal, he went for a walk on the terrace, and was out until 2 P.M. The day was warm, the temperature in the shade being 52·5°. On his return to the ward, his temperature, pulse-rate, and respiration-rate were taken every quarter of an hour, and the urine was passed and examined at the same intervals. The temperature rose only very slightly, and the urine at no time presented any trace of blood-colouring matter, but in place of it contained a small quantity of albumen. His blood before he went out displayed 3,710,000 red corpuscles per cubic millimetre, hæmoglobin power 45 per cent., and

CHART 6.



specific gravity 1051; the red corpuscles formed poor rouleaux, and were of various sizes, but well-shaped. The blood on his return from his walk presented 3,440,000 corpuscles in the cubic millimetre, its hæmoglobin capacity was 42 per cent., and its specific gravity 1050½. The corpuscles presented abnormal shapes, and there was obvious escape of hæmoglobin into the plasma. (See Chart 6.)

Temperature.	Pulse.	Resp.	Urine. Albumen.	Urine. Blood-colouring matter.
Bef. expos. 97·8°	—	—	None.	No guaiacum reaction, and no absorption bands.
2 P.M. .. 96·2	76	14	None.	
2.15 .. .. 97·3	82	18	None.	
2.30 .. .. 98·6	73	17	Trace.	
2.45 .. .. 98·8	85	13	Larger trace.	
3 .. .. 98·8	85	15	Larger trace.	
3.15 .. .. 99·0	80	14	One-tenth.	
3.30 .. .. 99·2	87	16	Fair trace.	
3.45 .. .. 99·2	82	15	Trace.	
4 .. .. 98·4	82	14	None.	

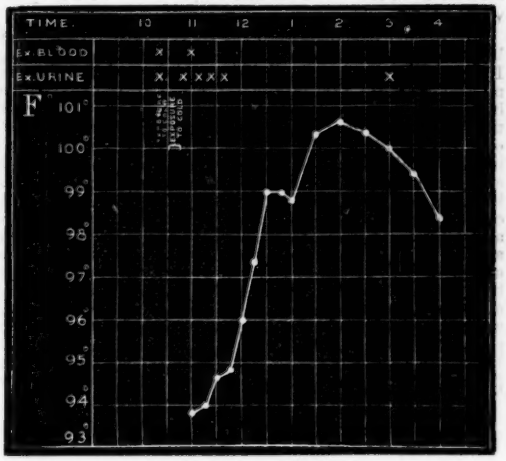
EXP. 10 (March 18th).—At 4.15 P.M. the blood was re-examined; and, excepting that there appeared to be an increase of 40,000 red corpuscles per cubic millimetre, it was in exactly the same state as at the last examination. At 4.30 P.M. he placed his hands in water which had been reduced by ice to a temperature of 40°, and kept them in it for a quarter of an hour, at the end of which time a series of similar observations to those made earlier in the day was conducted. The results are given in the following table:—

Temperature.	Pulse.	Resp.	Urine. Albumen.	Urine. Blood-colouring matter.
4.45 P.M. .. 98·4°	84	17	None.	None.
5 .. .. 99·2	87	17	Trace.	Guaiacum reaction.
5.15 .. .. 99·2	76	16	Much.	Hæmoglobin (spectroscope).
5.30 .. .. 99·8	84	16	1-4.	Ditto.
5.45 .. .. 99·7	78	17	Less.	Ditto.
6 .. .. 99·4	73	15	Trace.	Ditto.
6.15 .. .. 99·4	72	16	Trace.	Ditto.
6.30 .. .. 99·2	74	16	Trace.	Trace.
6.45 .. .. 98·9	74	16	None.	None.

It will be observed that hæmoglobin appeared in the urine half an hour after the removal of his hands from the water. The urine throughout was clear and transparent, of a port-wine colour, and entirely free from deposit, and, under the microscope, from blood-corpuscles. The blood in every instance was in the form of hæmoglobin, and no traces of acid hæmatin were detected. A specimen of blood examined at 4.45 P.M. presented only 2,950,000 corpuscles per cubic millimetre. The hæmoglobin in the specimen of urine passed at 5.45 P.M. was converted into acid hæmatin by a two hours' sojourn in the incubator at body temperature.

EXP. 11 (April 13th).—The patient had remained well and quite free from hæmaturia since the last experiment. At 10.30 A.M. he had a cold bath containing forty-eight gallons of water at a temperature of 51°, in which he

CHART 7.



remained for ten minutes. The blood examined previously to the bath presented 3,999,000 red corpuscles in a cubic millimetre, while the hæmoglobin power was 53 per cent. That examined fifteen minutes after the bath contained 3,175,000 corpuscles, and presented a hæmaglobin power of 49 per cent. The urine examined before the bath was normal. After the bath the patient had one or two slight rigors, and complained of "pins-and-needles" in his hands, which were white and cold. At 11 A.M. his temperature was 93·8°, and by 12 it had only risen to 96°. By 2 P.M. it had reached 100·6°, after which it gradually fell, until at 4 P.M. it was 98·4°. The urine passed at 10.50 A.M. (ten minutes after taking the bath) contained neither albumen nor blood pigment; that passed at 11.5 presented hæmoglobin; that passed at 11.20 presented hæmoglobin in large quantity; and that passed at 11.35 also presented hæmoglobin. A specimen passed at 3 P.M. contained a small quantity of acid hæmatin. (See Chart 7.)

The patient, who is still in St. Thomas's, has remained perfectly free from the attacks since the last experiment, on the 13th inst. He looks better now than he has looked for a long time, and but for occasional lumbar uneasiness or pain, which he has suffered from more or less during his illness, seems quite well. Before dismissing the case I may mention one or two phenomena connected with it, which I have not hitherto mentioned or have only incidentally alluded to. In the first place, he has (while under observation) always had a sallow hue; but this at the times of the greatest anæmia has amounted to definite, though slight, jaundice, such as one not uncommonly sees in cases of pernicious anæmia. In the second place, when he has been specially anæmic we have been able to observe capillary pulsation in the lips, such as is often observable in other cases of extreme anæmia, and is usual in aortic regurgitation. In the third place, at the commencement of his attacks, even if there has been no shivering, he has almost without exception complained of a sense of uneasiness and swelling in the throat, which has been so great as to prevent him from swallowing. But nothing in the condition of the throat has been detected sufficient to explain it.

(To be concluded.)

ON SUTURE OF THE BLADDER WOUND AFTER SUPRA-PUBIC LITHOTOMY,

AND ON SUPRA-PUBIC CYSTOTOMY WITH PERINEAL DRAINAGE FOR RETENTION FROM STRICTURE, AND RUPTURE OF THE NECK OF THE BLADDER FROM FRACTURED PELVIS.

BY C. J. BOND, F.R.C.S.,
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THE following remarks are the result of observation of some cases of supra-pubic cystotomy operated on for various causes during the last two years, in which one or two alterations in the usual method of procedure were adopted with, I think, a certain degree of advantage.

Supra-pubic lithotomy.—Of the six cases operated on, the bladder wound was carefully sutured in four. All of these, I am glad to say, healed by primary union, and there was no leakage from the wound after the first twenty-four hours. Two of these cases were boys under twelve, and two were adults over forty. A few words as to the method of the operation may be useful. The bladder is distended in the usual way with boracic lotion until it rises well above the pubes, and in the adult this may require the injection of from twenty to thirty ounces; latterly in children and in adults I have not distended the rectum at all. The coats of the bladder are then cut down upon and exposed without any dissection, the peritoneal fat and areolar tissue in front of it being drawn upwards from below by the forefinger of the left hand; this is, I think, a point of some importance, as it prevents hæmorrhage, and the bladder can be reached when not so distended or prominent as usual. A fine No. 0 silk suture is then passed by means of the doubly curved needle with eye at the point (Fig. 2), through the muscular coats at the upper

FIG. 1. FIG. 2.

FIG. 1.—Curved staff for passing through urethra from within the bladder.
FIG. 2.—Needle with double curve and eye at point.

end of the wound, and as near the peritoneal reflexion as possible. This marks the upper limit of the incision, and serves to hold up the bladder. It is very important to make the incision as near the top of the bladder as possible, as the ease with which the subsequent sutures are introduced depends on this point. After the incision and extraction of the stone the bladder is thoroughly irrigated with antiseptic lotion, and the sutures are introduced. These are of very fine No. 0 silk, and are passed through the muscular coat on either side of the incision by means of the doubly curved needle mentioned above. They are very close together, and are inserted while the wound is held on the stretch by the upper suture. They thus tend to approximate even more closely as the bladder contracts. Especial care is taken to pass the lower suture below the level of the actual incision. The abdominal incision is then sutured and dressed with dry dressings, a drainage tube being left at the lower angle. No catheter is left in the bladder.

It is noteworthy that in three out of the four cases some urine escaped between the bladder stitches on the first occasions of passing urine within twelve hours after operation, and this occurred whether a catheter was used or not. In none of the cases was a catheter necessary after the first twenty-four hours, and in the last case, an adult, the urine was drawn off six hours after operation, and none escaped from the wound. In none of the cases did this escape of urine between the stitches delay the union, which appeared to be complete in thirty-six hours, all the urine being then passed naturally.

In stout men the difficulty in suturing the bladder, though considerable, is by no means insurmountable, and the points of greatest importance in order to ensure success appear to be: First, to produce a healthy acid condition of the urine before operation by means of rest in bed and the administration of boracic acid internally in from five- to ten-grain doses thrice daily for some days before operation; the effect of this drug in clearing up the foul alkaline urine and relieving the cystitis caused by calculus is very marked even in from twelve to twenty-four hours after administration. Secondly, care must be taken to avoid bruising, either by handling or by dissection, of the coats of the bladder. Thirdly, the suturing must be done very closely and with very fine silk, care being taken to close both angles of the wound. Fourthly, no catheter should be left in the bladder, and the instrument should be used as little as possible after operation. Finally, the escape of acid normal urine between the stitches during the first twelve hours after operation does not in any way prevent primary union of the wound.

Of the two cases in which no attempt was made to suture the bladder incision, the first was an old man, aged sixty-three, in whom the urine was persistently foul and alkaline, and the patient much debilitated, and I regret I was at that time unaware of the value of boracic acid given internally; he, however, made a good recovery. In the second case one of the calculi was encysted, and this case requires a further description. The patient was a fairly healthy man, aged sixty-one. Three months previously he had been operated on for stone by the lateral method, and had fourteen small stones removed. Recovery was rapid, and he left the hospital on Oct. 30th, 1888. Within a fortnight, however, he began to suffer again from frequent micturition, and was sounded, but with a negative result. On Feb. 8th, 1889, he came to the infirmary with complete retention, and a stone was felt while drawing off the urine; the latter was alkaline and purulent, but soon cleared up under boracic acid given internally. The bladder was opened after distension in the usual way, and a small stone resembling the other fourteen removed. On passing the finger over the base of the bladder a small, hard, spicule or projection was felt behind the prostate, fixed in the mucous membrane, which closely surrounded it. This proved to be the projecting part of an imbedded calculus, which was only removed after considerable difficulty. The base of the bladder and encysted stone were first pushed up and fixed by the finger of an assistant in the rectum, then by means of the finger nail and edge of a scoop the mouth of the sac was enlarged and the calculus turned out of its bed, which when empty admitted the first joint of the forefinger, and was only separated from the rectum by a thin layer of tissue. It was situated about an inch behind the prostate and a little to the right of the middle line. The bleeding was slight, but owing to the prolonged manipulation no attempt was made to suture the bladder wound, but it was drained through the perineum by the following method. The round-lipped vesical opening of the urethra was felt by the forefinger introduced into the bladder, and the sound or staff having the one large special curve (Fig. 1) was passed along the finger and through the urethra until it passed through the membranous portion and bulged in the perineum just below the situation of the bulb. It was now held by an assistant, the legs were raised, and the point of the instrument, which was felt through the skin, was cut down upon, and the urethra opened on the groove which occupied the under surface of the end of the staff, which in this position more or less faced the operator; the sound now projected, and was drawn through, and with it a full-sized indiarubber tube, with two openings on its convex side, attached to the other end of the instrument; this was left in the bladder, and kept it well drained;

through it also the bladder could be frequently flushed after compressing the portion of the tube outside the perineum, and again drained by releasing the tube. The tube in this case was withdrawn, so that the upper end lay inside the bladder on the fourth day, and removed entirely on the sixth day. The perineal wound healed three days later, but urine escaped from the upper opening for eight days longer.

This case illustrates a point of considerable interest in reference to the connexion between an encysted calculus and other calculi felt in the bladder. On careful examination each of the fourteen small calculi will be found to be for the most part of the same size and shape, and there is on each a little roughened projection on one surface. It seemed to me at first probable that this was owing to the fact that each of the fourteen calculi had commenced as a deposit on the projecting portion of the encysted one, and had subsequently been broken off and freed by contractions of the bladder wall. On section, however, it was shown that this little roughened process did not extend to the uric acid nucleus, and stopped short at the phosphatic outer coating; hence they arose, probably, as independent renal nuclei, and the roughened projecting spots on each may be probably due to deposit while in contact, and perhaps temporary adhesion to the encysted calculus at these places.

In comparing the after-condition of those patients in whom after supra-pubic lithotomy the wound has been closed and unites by primary union with the condition of those in whom the wound is left open and unites by granulation, I am inclined to think that the granulating process, accompanied as it is by the formation of cicatricial tissue binding the bladder to the abdominal wall, leads occasionally to some inconvenience; for in the first of the two cases in which the wound was allowed to heal by granulation the patient complained for some months after the wound was healed of a painful dragging sensation above the pubes when he emptied his bladder, as though it was anchored at this spot and did not readily slide beneath the peritoneum into the pelvis when emptied. This fact and the great shortening of the period of convalescence when the bladder wound is closed by suture all point to the strong desirability of attempting this in suitable cases; for if unfortunately primary union does not occur, yet even then no harm has been done.

Supra-pubic cystotomy for retention from stricture.—We now pass to the consideration of the second class of cases in which the distended bladder was opened above the pubes, when no instrument could be passed by the natural channel. The first case was that of a man, aged fifty-five, in whom the cause of the retention was stricture of long standing (thirty years), accompanied with perineal fistulæ. As no instrument could be passed, and as it was necessary to drain the bladder, and not merely to draw off the urine by aspiration, I first made a prolonged and careful attempt to open the urethra beyond the stricture, but failed. The distended bladder was then incised above the pubes in the ordinary way; and feeling for the urethral orifice with the forefinger, the curved staff (Fig. 1) mentioned above, with the attached drainage-tube, was readily passed out through the perineal wound, and the bladder thus drained effectually. The relief in this case was very marked. The upper wound closed around the drainage-tube, and all the urine soon flowed by the lower opening. The tube was drawn into the bladder on the tenth day, and the upper opening allowed to close, and the tube eventually withdrawn entirely, a catheter being passed occasionally through the perineal opening. From the beneficial result experienced in this and other cases, I think it probable that in cases of retention from bad stricture, in which the bladder requires free drainage, the supra-pubic incision with perineal counter-opening, in the way above described, will be found to be the easiest and most effectual method of treatment.

Supra-pubic cystotomy for retention from laceration of the neck of the bladder from fracture of the pelvis.—In this case the conditions were somewhat different. A man, aged twenty-four, was crushed by a fall of earth. He was admitted two days later with swelling of the scrotum and lower part of the abdomen. A full-sized silver catheter was passed with some slight difficulty into a cavity, and blood-stained urine was withdrawn, but the impression conveyed to the touch was not that of having entered the bladder. No urine had been passed naturally since the accident; the diagnosis was fracture of the pelvis with rupture of the bladder either of the intra- or extra-peritoneal variety. I first, through a short median incision, opened the peritoneal cavity and ascertained by the finger that there was no intra-peritoneal rupture; the bladder could be felt somewhat distended, and there was no escape or smell of urine. The peritoneum was therefore carefully stitched with catgut, and the incision in the abdominal wall prolonged downwards, and the bladder exposed on its extra-peritoneal aspect. Blood-stained urine now began to well up from a cavity just behind and below the symphysis, and the finger here detected fractured and projecting bone, and the end of the catheter lying not in the bladder, but in the cavity containing urine which surrounded its neck. The bladder was opened, and the curved staff (Fig. 1) with a drainage-tube passed through the urethral orifice and into the perineum, where it was cut down upon and drawn through, and the bladder thus drained. Now, although in this individual case the patient died afterwards from the effects of the extravasation of urine into the areolar tissue of the pelvis, which occurred during the two days that elapsed before his admission and relief by operation, yet the actual result of the operation as shown at the post-mortem examination is, I think, encouraging. It was found that the bladder had been completely separated by the injury at its neck from the urethra, and pushed up into the pelvis, away from the triangular ligament, by the fractured ramus of the ischium; and as distension came on urine escaped into the pelvis. Now the drainage tube had completely drained the ruptured and displaced bladder, and also the cavity around the ruptured neck, and the distended scrotum and perineum had subsided; in fact, there was little or no urine in the pelvis, or about the seat of fracture. Moreover, in this case it would have been almost impossible to have reached the bladder from the perineum, or for the extravasation in the pelvis to have been drained in any other way. The peritoneum was found securely closed, and no trace of peritonitis in the abdominal cavity existed. These cases point, as it seems to me, to the advantages of a combined supra- and infra-pubic exploration and drainage of the bladder for the conditions described above, and may, I hope, lead others to adopt this method of treatment in suitable cases.

Leicester.

CANCER OF THE MALE BREAST, BASED ON THE RECORDS OF ONE HUNDRED CASES; WITH REMARKS.

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In most treatises on diseases of the breast this subject is dismissed in a few lines. Considering the large amount of material available, such a state of things is extremely unsatisfactory. That fuller information about cancer of the male breast is desirable, both on its own account and because of the value of such knowledge as a factor in the solution of many problems relating to cancerous disease in general, I have not the slightest doubt. Therefore I have undertaken the present investigation, which is based on the record of 100 cases collected from various sources, and on information otherwise derived. I will now proceed without further remark to lay before the reader the results at which I have arrived, arranged under their various headings.

Relative frequency.—Of 15,481 neoplasms consecutively under treatment at Middlesex, St. Bartholomew's, St. Thomas's, and University College Hospitals during the last sixteen to twenty-one years, 2422 originated in the breast—males 25, females 2397. These were distributed thus:—

Kind of neoplasm.	Males.	Females.	Total.
Cancer	16	1863	1879
Sarcoma	3	92	95
Myxoma	2	2	4
Adenoma	1	372	373
Lipoma	1	1	2
Papilloma	..	3	3
Chondroma	..	1	1
Angioma	1	..	1
Cystoma	1	63	64
Total	25	2397	2422

Whence it follows that 15 per cent. of all neoplasms originate in the breast; and of these only about 1 per cent. originate

in the male breast. This is a good illustration of the law that *obsolete structures have but little tendency to take on the neoplastic process.*

Variety.—Cancer of the male breast, as of that of the female, may originate either from the acini, the ducts, or the skin. Thus there were of my 100 cases:—

Acinous, 91—scirrhus, 88 (melanotic, 2), encephaloid, 3.
Tubular (cylinder-celled duct cancer), 6.
Cutaneous squamous-celled epithelioma, 3 (melanotic, 1).

In 26 of these cases a microscopical examination had been made: 17 were fibrous alveolar cancers (melanotic 2), 6 cylinder-celled duct cancers, and 3 squamous-celled cutaneous epitheliomas (melanotic 1). Whence it appears that the male breast is relatively more liable to the tubular variety of cancer, originating in the excretory ducts, than the female; this one might have expected *a priori*, because in the normal condition of the male breast ducts predominate and acini are but imperfectly developed.

Squamous-celled epithelioma of the skin of the nipple, areola, or mammary region is an exceedingly rare affection in both sexes. Among my 2422 cases of mammary neoplasms there is not a single example of it. Billroth has gone so far as to deny its occurrence in the female breast, but Czerny has since described a case—the only one of the kind on record. We see, then, in accordance with the rule for epithelioma of the skin in general, that males are much more liable to this variety of breast cancer than females. Another fact to be noted is the relatively frequent occurrence of melanotic cancer in the male breast (3 per cent.). We may perhaps find an explanation for this if we recall the fact that we here have to do with an obsolete structure which has lost most of its special characters, and is gradually reverting to the primordial cutaneous condition out of which it formerly evolved. With regard to the 3 cases of so-called encephaloid cancer I have little to remark, since in all the histological examination is wanting. I will only mention that of 306 cases of cancer of the female breast under treatment at the Middlesex Hospital during the last seven years there was not a single example of encephaloid cancer; all the supposed cases of this kind on microscopical examination proved to be sarcomas.

Leaving the cutaneous epitheliomas for separate treatment, I will now give an analytical summary of the remaining 91 cases; for I have ascertained, by working out the histories of the tubular and acinous cases separately, that they differ in no essential particular.

Age.—The earliest age at which the disease was first noticed (in 90 cases) was 20 years; the latest 82 years; the mean age 50 years. In the subjoined table the numbers for each quinquennial period are given, calculated on the percentage basis, and for comparison I have appended the corresponding numbers in cancer of the female breast:—

Sex.	Total number of cases.	20 to 25 yrs.	25 to 30 yrs.	30 to 35 yrs.	35 to 40 yrs.	40 to 45 yrs.	45 to 50 yrs.	50 to 55 yrs.	55 to 60 yrs.	60 to 65 yrs.	65 to 70 yrs.	Over 70 yrs.	Mean age.	Earliest age.	Latest age.
Males	90	2	2	9	12	11	17	15	12	7	3	10	50	20	82
Females	500	0·6	4	6	14	16	20	15	10	9	3·2	2·2	48	22	84

It will be seen from this table that the average age at which the disease originates in males is 2 years later than in females. It is further noticeable that a relatively large number of the male cases begin over 70. In most other respects there is remarkable similarity as to the age distribution in the two sexes. Not a single case originated in either sex under the age of 20.

Total duration of life.—In 18 fatal cases the total duration of life, dating from the time when the disease was first noticed, averaged 61 months, which is about 8 months longer than the average duration of the disease in the opposite sex.[1] Of the above cases, 5 had undergone amputation of the breast &c.; in these the duration of life averaged about 124 months; or 20·5, 27, 117, 182, and 273 months each. In the other 13 cases no operation had ever been performed: in these the duration of life averaged 38 months—the shortest period 11 months, the longest 85 months.

Duration of life subsequent to amputation for the primary disease.—This was noted in 6 cases; it averaged nearly 60 months. The exact duration in each case was as follows: 26 days, 1 month, 5, 13, 78, and 260 months. In 25 similar cases of the female breast I found the average period was about 40 months, the longest 259 months.[2]

Interval between first operation and first obvious recurrence. In 14 cases this averaged 9·7 months, the maximum 32·5, the minimum 1·5 months. In females, according to my observations, the average interval is 26 months. In further illustration of this subject I append the following:—

3 months and under in 3 cases.	13·0 months in 1 case.
3 to 4 months in 5 cases.	19·5 ,, 1 ,,
8 months in 1 case.	26·0 ,, 1 ,,
10 ,, 1 ,,	32·5 ,, 1 ,,

Civil state.—Of 12 cases, 7 were married, 2 widowers, and 3 single. Particulars with regard to offspring are given in 3 cases: one was the father of 6 and another of 15 children; the other had no offspring. In 38 cases the occupation had been as follows: butcher, gentleman, and carpenter each in 3 cases; sailor, compositor, merchant, teacher and clerk, each in 2 cases; soldier, brass-finisher, 'bus conductor, piano factory, chimney-sweep, clergyman, blacksmith, locksmith, publican, labourer, waggoner, hospital attendant, plasterer, peasant, bootmaker, carrier, coachman, stone sawyer, and hall porter, each in 1 case.

The side affected.—Right side in 38 cases, or 53 per cent.; left in 33 cases, or 47 per cent. In females the left breast is always the more frequently affected. Of 151 cases, I found: left, 84 (56 per cent.); right, 67 (44 per cent.). In 4 of the above 71 cancers of the male breast, both breasts were affected on admission, but in no instance were both breasts primarily affected. Similarly of 151 cases in females, in 7 both breasts were involved on admission.

Seat of initial lesion.—This was noted in 14 cases: in 8 the disease was central, being situated underneath the nipple; in 3 it was near the nipple; in 1 below the nipple and to its axillary side; in 1 below and to its sternal side; and in 1 above the nipple and to its axillary side.

Character of initial lesion.—In 42 cases this was as follows: small nodule or lump (varying in size from a pea to a hazel-nut) in 30 cases; enlargement and induration of gland in 5; and redness, soreness, or induration of nipple or areola (Paget's disease 1) in 7. In the female breast Gross found that the development of cancer commenced as Paget's disease in 1·31 per cent. of all cases.

Discharge from the nipple.—This was noticed during the course of the disease in 7 out of 91 cases: it was sanious in 4, puriform in 2, and lactiform in 1. According to Gross, females are liable to similar discharges in 15 out of 207 cases.

Previous injury or disease of breast.—Of 30 cases there was a history of previous injury or disease in 16, or 53 per cent., as compared with 43 per cent. in females. The injuries are described as contusions in 10 cases, recurrent pressure at work in 2, and strain in 2. The only previous disease noted were two cases of long-standing eczema of the nipple and areola.

Previous health.—This was stated in 13 cases. It had been good in 11 (with no serious illness since youth in 3) and bad in 2 cases. The following previous diseases are noted as having occurred since childhood: pneumonia and migraine each in 2 cases; tubercular arthritis of knee, hæmorrhoids, eczema, erysipelas of face, herpes zoster, chancre, gonorrhœa, epilepsy, and dyspepsia each in 1 case. With regard to the patients' habits, 3 are said to have been temperate and 3 intemperate. As to syphilis, inquiries were made in 7 cases, but there was evidence of this disease only in 1.

Family history.—Of 29 cases in which inquiries were made, there was history of cancer in 7 families, or in 24 per cent. This is almost exactly the same result as I obtained in females, there being a history of cancer in 33 out of 136

[1] Vide Middlesex Hospital Surgical Report for 1885, p. 87.

[2] Ibid.

cases. The relatives thus affected and the seats of the disease may be shown as follows:—

Father's mother (one family) ...	Locality not stated.
Father's sister (one family)	Breast.
Fathers (four families)	Neck.
	Liver.
	Breast.
	Locality not stated.
Mothers (three families)	Tongue.
	Lip.
	Locality not stated.
Patient's sisters (two families) ...	Breast.
	Locality not stated.

Thus of the 7 cases in which the seats of hereditary disease are stated the breast was affected in 3. In 3 cases there was history of cancer in more than a single relative—thus: (1) father died of cancer of neck, and mother died of cancer of tongue; (2) father died of cancer (locality not stated) and 2 of patient's sisters (1 of breast, the other locality not stated); (3) father's mother and patient's mother both died of cancer (locality not stated).

Duration of the disease from the time it was first noticed until the patient came under observation.—In 86 primary cases this averaged 29·5 months; in 119 primary cancers of the female breast the average was 26·5 months, the minimum period 3 months. The following statement further illustrates this subject:—

Under 6 months in	7 cases.	36 to 42 months in	11 cases.
6 to 12 months in	15 ,,	42 to 48 ,,	1 case.
12 to 18 ,,	14 ,,	48 to 54 ,,	10 cases.
18 to 24 ,,	7 ,,	60 to 66 ,,	2 ,,
24 to 30 ,,	12 ,,	78 to 84 ,,	3 ,,

104 months in 4 cases.

In 10 recurrent cases the duration of the disease on admission had averaged 62 months, as compared with 75 months in 39 cases of recurrent cancer of female breast. In 2 cases the duration of the disease had exceeded 102 months—viz., 129 and 130 months respectively.

State on admission.—Of 26 primary cases, 20 were well nourished (obese 4, sallow 1); of these, 9 were ulcerated and 11 non-ulcerated. The other 6 cases were weak and emaciated (sallow 2); of these, 5 were ulcerated and 1 non-ulcerated. In 14 of the above cases retraction of the nipple was noted. In 2 cases the primary disease had assumed the atrophic form, in 2 cases the diffuse discrete form, and in 1 case the *en cuirasse* form; in the others it presented a more or less circumscribed mass. Of 3 recurrent cases, 2 were non-ulcerated (1 well nourished, 1 weak and emaciated); 1 was ulcerated, the patient being weak, emaciated, and sallow.

The axillary glands &c.—Of 68 primary cases, there was obvious enlargement of the axillary glands in 43, or in 63 per cent. In 118 primary cases of the female breast I found the axillary glands affected in 86 or in 73 per cent. In 2 cases the glands near the clavicle were affected as well; both of these were ulcerated. Of the 43 cases in which the axillary glands were affected, 26 were non-ulcerated and 17 ulcerated. Of 25 cases in which there was no obvious affection of the axillary glands, 20 were non-ulcerated and 5 ulcerated. Of 12 recurrent cases, there was obvious enlargement of the axillary glands in 4 (clavicular glands as well in 1 non-ulcerated case); of the latter, 2 were ulcerated and 2 non-ulcerated. The other 8 cases, in which there was no glandular affection, were all non-ulcerated.

(To be concluded.)

BURIALS IN THE METROPOLIS.—A return has been published giving the numbers of bodies at present interred in the principal burial places in the metropolis as follows:—Abney-park, Stoke Newington, 82,570; Brompton Cemetery, 155,064; St. Mary's, Battersea, 24,648; Camberwell Cemetery, 80,790; St. Paul's, Deptford, 50,459; St. James', Highgate, 76,220; All Soul's, Kensal-green, 30,265; St. Mary's Kensal-green, 56,246; Lambeth Cemeterry, 109,010; South Metropolitan Cemetery, 73,750; All Saints', Nunhead, 65,550; Paddington Cemetery, 82,536; City of London and Tower Hamlets Cemetery, Mile-end, 247,000; and Woolwich Cemetery, 27,687. The total numbers of bodies registered as buried in metropolitan cemeteries is 1,276,875.

ON THE TREATMENT OF CHRONIC URÆMIA BY MORPHINE.

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(Concluded from page 209.)

IT is not the purport of this paper to discuss at length the pathology of what, for want of a term, we call "uræmia." By this term we understand the various symptoms that arise from the retention in the blood of the various excrementitious substances naturally excreted by the kidneys, whether this arises from disease of these organs or from some impediment to the escape of urine. The subject is one of extreme complexity, which has gone through many phases reflecting the waves in the tide of physiological and pathological advances. It was very fully and ably dealt with by Dr. Carter in his Bradshawe lecture last year.[1] I propose to deal with it only in so far as it enables us to understand the *rôle* played by morphine in its treatment.

It is now generally agreed that (1) uræmia is a poisoning of the nervous system—a toxæmia; (2) the poison is developed within the body of the sufferer—auto-toxæmia. All recent researches go to prove that the poison is not simply urea, though urea is certainly poisonous. The conclusion has long been reached by all workers at the subject—Grainger Stewart, Dickinson, Bartels, and others—that the poison is not one, but several. Bouchard claims to have been able to determine the existence of seven distinct toxic substances combined together in the most variable proportions under different circumstances, of which two were convulsivant, one of the two being the colouring matter or contained in it; one (probably urea) diuretic, one narcotic, one sialogogue, one pupil-contracting, and one temperature-reducing. He traces the toxicity of the urine to the four following sources: 1. Aliments, and more especially their potassium compounds. 2. The absorbed products of intestinal decompositions. 3. Secretions, such as the bile, saliva, &c. 4. Tissue degenerations. He further finds that the toxicity of the urine varies both in kind and degree at different hours of the day and night. Researches such as those conducted by Bouchard, Feltz, and Ritter, and others, whilst they require repeated confirmation, are very suggestive in serving to explain both the varying symptoms of uræmia in the same patient or in different patients in a way not hitherto possible.

Uræmia, then, is a poisoning of the nervous system, and the poisons are formed within the body of the patient. How is it to be treated? There are three principles: (1) To eliminate from the system the poisons already present; (2) to counteract the poisons; (3) to prevent the further formation of poisons. Treatment to be of permanent good must always be directed to the first and last aims. The first we attempt by promoting the action of the skin by hot-air baths, packing, &c., and by the use of diaphoretics, especially jaborandi or pilocarpine; by carrying off waste products and their decompositions from the bowels by means of hydrogogue cathartics; and by increasing the flow of urine by vegetable and saline diuretics. The last aim, the prevention of the formation and the absorption of further poisons, by greatly limiting the nitrogenous diet, as by placing the patient on an exclusively milk diet, and by controlling intestinal decomposition by certain drugs. But whilst we are endeavouring, as should be done in every case, to get rid of the poisons and prevent further formation, our patient may succumb to the effects of those present. Here comes in the second principle of treatment—namely, the attempt to counteract the poisons. Every bane has its antidote. The counteraction of the poisons is not only of service in minimising the effects of the poisons, but is of further help in enabling us to gain time to carry out the other indications already discussed. Thus in uræmic convulsions experience has taught that the damaging and often fatal results are held in check by inhalations of chloroform and by the internal or rectal administration of chloral. Morphine has been used, more especially by American

[1] THE LANCET, vol. ii. 1888, p. 355.

physicians, for the same purpose in these cases, and it is claimed with better results.

It will have been noticed that the most prominent symptom in the first case, and a distressing symptom also in the second, was difficulty of breathing—uræmic dyspnœa, or so-called renal asthma. This, in its typical form, is not a very common symptom of uræmia, though I should not, from my own experience, have thought it was so rare as it appears to have been in that of Sir William Roberts.[2] This uræmic dyspnœa merits some consideration. It generally comes on, often suddenly or rapidly, in the evening or early night, is often very intense, lasts for some hours, and gradually passes off in the morning. It returns night after night, and the patient may be quite free from dyspnœa in the daytime. I have known such cases diagnosed as ordinary asthma, the renal origin being unsuspected. I have long been in the habit of teaching that, when such a case is examined at an early stage of the attack—that is, during the first few nights—it is remarkable how little is to be heard, differing altogether in this respect from the noisy cooing rhonchi heard in bronchial asthma. I am interested to notice that Dr. Carter makes the same observation. Dr. Sutton is the only other physician whom I have heard direct attention to this point. Later in the attack, bubbling râles and crepitations are heard, indicating the occurrence of œdema of the lungs. It was for this uræmic dyspnœa especially that the morphine was prescribed. I have for some years been accustomed to treat such cases, in addition to the measures indicated under principles 1 and 2, by means of amyl nitrite, nitro-glycerine, chloral with and without alcohol, ammonia and ether, inhalations of oil of juniper, Himrod's cure, chloroform, &c. One of the worst cases of uræmic dyspnœa I have ever observed I saw recently with Dr. W. J. Mackenzie, of Liverpool-road, Islington. I prescribed small doses of nitro-glycerine, frequently repeated, and, if it failed, morphine. The dyspnœa was greatly relieved, I subsequently learned, by the nitro-glycerine. It will be observed that morphine was not prescribed in the cases I have narrated until several of the remedies above mentioned had been ineffectually tried. The relief afforded by the morphine was extremely prompt, and equally successful in each recurrence of the attack. I think all the facts of uræmic dyspnœa, its periodicity, sudden onset, and relief by antispasmodics, point to a spasmodic neurosis due to poisoning of the nerve centres. Dr. Carter, with, I think, great probability in his favour, suggests that the spasm is of the bloodvessels rather than of the bronchial tubes. This accounts for the absence of auscultatory signs in the early stage, and I think the subsequent pulmonary œdema is another point in favour of Dr. Carter's contention. The high arterial tension, on which Traube and Dr. Broadbent[3] have deservedly laid so much stress in uræmia, due to spasm of the arterioles and capillaries, the great rapidity of the heart's action, the cyanosis and clammy sweat noticed in Case 1, all support this view. Dr. Carter suggests the analogy between uræmic dyspnœa and muscarine poisoning, which Dr. Lauder Brunton has shown produces intense dyspnœa, by causing spasm of the pulmonary and other arteries. He further hints the possibility of neurine and choline—which have been separated from the human body by Brieger—structurally and morphologically allied to muscarine, or some closely similar substance, being proved to be the toxic element, which poisons the nervous system and gives rise to the dyspnœa in Bright's disease when not eliminated from the blood. If this be the case, then, as Dr. Carter writes, we may anticipate the time when a physiological antagonist shall be discovered capable of unlocking the spasm and relieving the distress as promptly as atropine does in muscarine poisoning. I venture to suggest that this is how morphine acts in relieving the dyspnœa of Bright's disease. It counteracts the poison, whatever it may be, that causes the spasm of the pulmonary arterioles (or bronchioles).

Headache and convulsions are very common symptoms of uræmia. The former was present in both my cases. The immediate cause of both headache and convulsions, apart from or in connexion with Bright's disease, has been much discussed. There is a good deal of evidence in favour of arterial spasm being the immediate exciting cause of each. This does not of course explain the pathogeny of headache or epilepsy, because we have to look further back for the cause of the spasm of the arterioles. In uræmia we have this to hand. We know we have a poison or poisons in the blood, and we have evidence of spasm of the bloodvessels, so that we are able to connect the cause with its effect. I think we are justified in referring the relief of the headache as well as the dyspnœa to the influence of morphine in antagonising the poison.

Uræmic convulsions were not present in my cases, but I shall immediately refer to their treatment by morphine. The success of morphine in the treatment of uræmic convulsions I should also refer to counteraction of the poison that excites spasm of the arterioles in the cerebral cortex, which is the anatomical substratum of the motor phenomena. As I have already stated, at the time I used morphine in the narrated cases I had only read brief references to the experience of Dr. Loomis and others in the treatment of uræmic convulsions. I have since consulted the original paper of Dr. Loomis, which appeared in the *New York Medical Record*, 1873, p. 365. Here will be found some very striking cases, illustrating not only the safety, but the advantage of the employment of morphine in the treatment of both uræmic convulsions and of other uræmic symptoms, some of which were present in my own cases. Dr. Loomis, writing on the employment of morphine when "premonitory symptoms of acute uræmia were present, as well as during the active manifestations of uræmic intoxication," says:—"So far as I am able to judge its administration has been uniformly followed by good results. In no instance am I aware that I have caused a fatal narcotism." Loomis certainly has shown the courage of his convictions, for he has given half a grain of morphine in a single dose to a patient in complete coma; and what is more remarkable and important, with relief to the condition. Scanzoni appears to have been the first to use morphine for uræmic convulsions, and Loomis mentions that he first gave morphine at the suggestion of Dr. Metcalf. Loomis and his followers have administered morphine in doses of from half a grain to one whole grain by hypodermic injection. Quite recently Mr. Alfred Grace[4] has reported two cases of puerperal convulsions treated by morphine. In the first he gave a hypodermic injection of one grain at a single dose, and later another injection of nearly a grain. In the second case a single injection of a full grain of morphine was administered. Both cases made a perfect recovery. Purdy[5] advises beginning with one-sixth to one-fourth of a grain, and writes, "The range of utility and safety of morphine in uræmia is strictly confined to the convulsive seizures. Its employment is improper in the state of pure coma or chronic uræmia unassociated with convulsions." The cases chronicled by Dr. Loomis and those I now bring forward directly negative this latter qualification. After the statements I have quoted, I shall hardly be accused of bold or venturesome efforts. My friend and colleague Dr. Ralfe, in the Year-book of Treatment, 1889, mentions that in a patient of his suffering from granular kidney, with dropsy and ascites, the subcutaneous injection of one-sixth of a grain of morphia speedily relieved a persistent and distressing attack of renal dyspnœa which all other means had failed to control, and the relief was continued for some days following, without further recourse to the drug. But Loomis claims for morphine not only the relief of dangerous and distressing symptoms, but more decided benefit still. Writing of the hypodermic injection of morphine in such cases, he says: "The almost uniform effect of morphine so administered is (1) to arrest muscular spasm by counteracting the effects of the uræmic poison on the nerve centres; (2) to establish profuse diaphoresis; (3) to facilitate the action of cathartics and diuretics, more especially the diuretic action of digitalis.

Enough has, I hope, been said to justify the further trial of morphine in uræmia. I am not advocating its employment to the exclusion of other remedies of ascertained utility in the treatment of Bright's disease and the uræmia arising therefrom. The evidence I have adduced shows that in spite of the asserted danger of opium and its alkaloid morphine in patients suffering from renal disease, it may in suitable cases be safely employed, and afford relief in the very distressing conditions we often witness in Bright's disease. I do not recommend its indiscriminate use; and in the light of the asserted susceptibility of patients with disease of the kidneys to the toxic effect of opium, it will be given with eyes open to its danger. It certainly afforded striking relief to the cases I have narrated; and though in these I

[2] Op. cit., p. 480.

[3] THE LANCET, vol. i. 1887, p. 711.

[4] British Medical Journal, March 16th, 1888.

[5] Bright's Disease, 1886, p. 83.

can only claim a palliative and not a curative influence, they were cases which, from their nature and degree, no other result could be expected. In less advanced cases, where the kidneys are capable of recovery, better results may be hoped for, and, indeed, have been obtained.

Cavendish-square, W.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

REMARKABLE SUICIDE.

By JOHN GRANT, M.B., C.M. EDIN.

AT 8 A.M. on June 2nd I was called to see F. B——, a blacksmith, aged forty-eight. He was lying on his back in bed, dressed in a cotton shirt and flannel under-shirt, dead. He had come home the preceding evening at 6 P.M. partially intoxicated, having been drinking for two days. Of late he had been addicted to drink. He went to bed at once, but left his room in half an hour, coming downstairs. He was quarrelsome, but on persuasion returned to bed. At 11 P.M. his wife tried to rouse him, but, getting no answer, thought it best to let him alone. At 6 A.M. next morning she again tried, but failed. At 8 A.M. her son broke open the door, and found his father in a sitting posture with his back against it, preventing entrance. He did not go in, but ran for a police officer and medical man. The constable arrived first and forced open the door, finding the deceased as described. Round his neck was a common red cotton handkerchief twisted and tied to the door handle. He immediately cut him down and placed him in bed. On examination I found the body cold and rigid. Post-mortem lividity was well marked on the lower part of the back and legs. The pupils were equal, and moderately dilated. The jaws were firmly clenched and the lips blue, but the face as a whole was little altered, and there was no protrusion of the tongue or eyeballs. Round the front part of the neck immediately below the chin, extending upwards and backwards obliquely over the occiput, was a mark produced by the handkerchief; it was about an inch and a half broad, the skin being quite natural and pale; the texture of the cloth was clearly impressed, but there was no roughening or excoriation; at about an inch on either side of the middle line posteriorly the mark ceased. Turning the man on his face, I noticed the buttocks were flattened and white.

Remarks.—It is perhaps worthy of note that the post-mortem external appearances afforded some indication of the position in which death occurred. The presence of the lividity on the lower part of the back and legs, the flattened pale nates showed that the body had assumed a more or less vertical position, and the minute impress of the cloth on the anterior aspect of the throat pointed to its inclination forwards—in fact, indicated that the man had, so to speak, sat down and hanged himself. The handle of the door was only two feet nine inches from the floor. It is probable the deceased made a loop of his handkerchief, hitched it over the door handle, twisted it to fix it there, but leaving space to admit his head. He then sat down on the floor with his back to the door, put his head through the loop, and bent forward. The forward inclination of the body and the drooping of the head probably induced suffocation by pressure of the glottis against the back of the throat. One has only to try the position for a few seconds to become convinced of the congestion it causes in the head. The entire facts showed considerable method and determination on the part of the deceased.

Maidstone.

INSANITY FOLLOWING MUMPS.

By R. PERCY SMITH, M.D., M.R.C.P.

INSANITY is well known to be associated with several of the infectious fevers as a complication or sequela, but I am not aware that cases following mumps have ever been recorded. Mumps is not mentioned in the ordinary text-books on insanity under the heading of "Post-febrile Insanity," and therefore the following cases have appeared to me to be worth recording.

CASE 1.—G. R. R. T——, a clerk, aged nineteen, was admitted to Bethlem Hospital on June 19th, 1888. He had enjoyed good health previously to this illness and had never suffered from insanity before, and there was no neurotic inheritance. A fortnight before admission he had suffered from mumps, there being other cases in the family and in the same village. His attack was associated with diarrhœa so severe as to be called "English cholera" by the doctor attending him. The patient was said to have been extremely exhausted and almost pulseless afterwards, and was described by his friends to have been "nearly gone." On recovering from this about five days before admission he became excited, sleepless, and rambling, and passed into a condition of acute mania, in which state he was admitted to hospital. There was no special feature about his insanity while in the hospital; he rather rapidly improved, and was discharged recovered in October last.

CASE 2.—This case occurred in a young medical man who had an attack of mumps complicated with severe orchitis, for which he was admitted to a general hospital, and as a result of which he became depressed and suspicious, thought he was guilty of imaginary crimes for which he dreaded punishment, and was suicidally inclined. He had a short attack of melancholia, which passed off with improvement in his physical health, and eventually he recovered perfectly without the necessity of being sent to an asylum.

It is worthy of note that in both cases there was a severe complication associated with the mumps, so that there was considerable physical exhaustion, this seeming to have more to do with the attack of insanity than and severe febrile process or metastasis.

Bethlem Royal Hospital.

NODULAR PERIOSTITIS IN CHILDREN'S RHEUMATISM AND HEART DISEASE.

By ANGEL MONEY, M.D., F.R.C.P.

OF the occurrence of subcutaneous nodules we have hay records enough and to spare. It is not so generally known that nodules are rheumatic manifestations in other tissues. Nodular pericarditis, pericarditis with fibrous nodules, nodular pleurisy, and nodular periostitis are, however, undoubted facts. I have notes of a few cases in which subcutaneous nodules were associated with nodules growing from the bone—exostoses—resembling subcutaneous nodules in every respect except that they are firmly fixed to the bone and cannot be dislodged. One case, a boy aged ten, died, and then I was able to prove post mortem that his olecranon had nodular exostoses growing therefrom. He had many nodules in the valves of the heart, chiefly the mitral valve. Rheumatism is a frequent producer of fibrous nodules, limited localised lumps of connective tissue; a nodular sclerosis, different from the nodules of tuberculosis and from the limited fibroid formations of syphilis, but nodules or limited fibrous formations all the same.

Harley-street, W.

CASE OF SUPRA-PUBIC OPERATION OF OPENING THE BLADDER FOR STONE.

By CECIL A. CORKE, F.F.P.S., L.R.C.P., L.S.A.

W. B——, aged sixty-eight, consulted me about four years ago, when he suffered from chronic bronchitis, pain on micturition, and was passing gravel. About twelve months ago he passed some bloody urine, but this symptom has only appeared twice since. I sounded him for the first time in June, and discovered the presence of a stone; but from the symptoms then and in subsequent soundings I concluded that the stone was encysted, and from its position not easy to reach by the ordinary operation of lithotomy, so determined upon the supra-pubic operation.

On Wednesday, July 3rd, chloroform being administered by my coadjutor, Dr. Freeman, R.N., and in the presence of Dr. Sankey of Boreatton and Dr. Sandford of Baschurch, who kindly assisted me, I performed the operation, having first distended the rectum with an indiarubber ball of 10 oz. capacity. I injected ten to twelve ounces of boracic solution into the bladder, carefully dissecting and scratching my way

through the tissues. The knife was only used three times. I had no difficulty in reaching the bladder and in extracting the stone, which was, as I had supposed, encysted, and not to be easily discovered; in fact, I at first thought there was no stone, as only a very small surface could be felt, and requiring some little manipulation to free it from its cyst walls. A drainage-tube was passed from the external wound through the urethra, and left *in situ* about five days. The patient has made an uninterrupted recovery, and is now (July 26th) passing all his urine by the urethra, and the wound is nearly healed. The operation was attended by very little hæmorrhage, all veins being held aside, and was much easier to perform than the perineal operation. The stone is about an inch long, half an inch broad, and weighs one drachm five grains.

I place this case upon record as the high operation is only recommended for large calculi; but in all cases of encysted calculi I strongly advise it, and believe it the best resource.

Baschurch.

LARGE BURNS.

By T. SOMERVILLE SMITH, M.D.

ON February 25th C. W——, aged three years and six months, being left alone in the kitchen, played with the fire, burning himself in a dreadful manner. I saw him half an hour after the accident, and found him in a state of collapse, suffering from shock. The extent of the burns, subsequently ascertained, was as follows:—

All over the abdomen, width five inches, length seven; down the left thigh, width three inches, length four; on the back, nine inches long and four wide; round each arm, three inches long and four wide; round the neck, three inches long and three wide. The true skin was burnt through over the whole of the abdomen and a portion of the back. Linen rags steeped in linseed oil and lime water were applied to the burnt surfaces. Purgatives, at first administered, were discontinued, as peritonitis set in, accompanied for nearly a whole day with suppression of urine. The child lay on its back with its legs drawn up, the bowels not being relieved for eight days. There was delirium at night for the first five or six days. The treatment was as follows: Brandy during collapse, with bark and ammonia; bromide of potash for rest at night. Linseed oil and lime water were continued for about a week, at the end of which linseed poultices, with plenty of linseed oil in them, were applied to the abdomen and part of the back to remove the eschars. When the wounds were perfectly clean the whole of the raw surfaces were smeared with an ointment composed of lard, zinc, and glycerine, under which they slowly but surely healed. The child's strength was kept up by tonics. There is a very slight contraction in the left groin, where the thigh and abdomen wounds meet; in all other respects the child is now convalescent.

Sittingbourne.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

ST. THOMAS'S HOSPITAL.

CASES OF ORBITAL CELLULITIS AND ORBITAL ABSCESS; REMARKS.

(Under the care of Mr. J. B. LAWFORD, Assistant Ophthalmic Surgeon.)

THESE cases, which are examples of inflammation of the cellular tissue of the orbit, some of which terminated in abscess, illustrate the difficulty often met with in tracing a disease to a definite cause, as well as the successful treatment of a serious condition. In no case was any history of injury obtained, and in only one was disease of the bony wall of the orbit found, making it probable that the suppuration in the orbit was secondary to a localised periostitis. There had been no recent attack of fever or erysipelas, but in Case 4 renal disease was present, the patients were apparently free from evidence of visceral disease. Mr. Lawson[1] speaks of an acute inflammatory exudation into the orbit of a syphilitic nature presenting the characters of a cancerous growth, and considers that some of the firm orbital tumours which had gradually subsided under treatment may have been of this nature. To show the remarkable resemblance, he cites a case in which he was himself misled by this close resemblance to malignant disease. When unable to account satisfactorily for the onset of an inflammation, it is not infrequent to find it ascribed to a chill, and this observation applies equally to orbital cellulitis as to inflammations in other parts of the body. Day[2] described a case of acute exophthalmos. After exposure to cold rain the eye protruded nearly three-quarters of an inch, the pupil being dilated. The protrusion of the eye subsided only after two months, without suppuration in the orbit, and vision continued unimpaired. The fundus was not examined. He ascribed the condition to congestion of the vessels, and perhaps infiltration of serum or blood in the post-orbital tissues. There was apparently nothing to cause the disease excepting the exposure to cold. The subjects of orbital cellulitis and abscess are so frequently depressed and feeble that it is quite possible sudden changes of temperature may lead to a localised venous thrombosis, with a secondary inflammation of the tissues around. The disease may be part of a pyæmic infection of the system, and is occasionally found accompanying the puerperal state. It may be secondary to abscess of the lacrymal gland. The disease may prove fatal by extension of the inflammation backwards to the cerebral membranes, but this is not a frequent sequence. Much more commonly the result of the disease is shown in more or less complete loss of vision in the eye of the affected side, by stretching of, or pressure on, the optic nerve; ulceration of the cornea may also occur from damage to the ciliary nerves behind the globe.[3] As regards prognosis, much will depend upon the period in the course of the disease at which treatment is commenced and the way in which it is carried out, as well as upon the causation of the disease.

CASE 1. (From notes by Mr. Hinnell.)—Charles D——, aged thirteen, a schoolboy, was admitted on Aug. 25th, 1886. The illness began on the 15th, when the boy awoke at night with severe pain in and about the right eye. The lids were then noticed to be swollen. The pain has continued since, and there has been frequent vomiting. There is no history of injury, or of recent illness. Family history unimportant.

On admission, there was marked proptosis of the right eye, the globe being protruded to the outer side of the middle line; almost fixed, but a little outward movement retained. There was slight bluish discolouration of the lids, with very little swelling. The cornea were clear, the pupil equalled the left in size and reaction. V = J.1. Under ophthalmoscopic examination the retinal veins were engorged; the margins of the disc hazy. On palpation there was a sense of resistance beneath the upper orbital margin, with doubtful deep fluctuation. There were no enlarged glands. The child was in pain, looked ill and thin, and was said to have lost flesh rapidly. The tongue was furred. Temperature 97·8°; pulse 66; urine 1032, acid, no albumen or sugar.

Aug. 27th.—The condition of the eye has scarcely altered, but there is more pain. No sickness since admission. The temperature has slowly risen, and remains about 100°. There is now a solid resistance to be felt at the lower and inner part of the orbit. Ether having been administered, an incision was made close to the lower orbital margin towards the nasal side. At a depth of an inch to an inch and a quarter thick fetid pus was discovered, and two to three drachms let out; a small area of rough bone was felt. A drainage-tube was inserted, and an iodoform dressing applied. Pus continued to drain away in small quantities for the next two days. The boy was much more comfortable. The temperature continued above normal.

30th.—More proptosis; discharge of pus continues.

Sept. 3rd.—Considerable chemosis of conjunctiva; eyeball greatly protruded. Ether again administered, and the

[1] Diseases and Injuries of the Eye. [2] Medical News, April, 1888. [3] Nettleship.

incision in the lower lid enlarged outwards. No further collection of pus discovered. Steady decrease in the protrusion of the eye ensued; pus continued to escape in small quantities. The pain soon ceased, the temperature became normal, and the boy improved in every way.

16th.—Slight recovery of voluntary movement of the eyeball upwards, inwards, and outwards.

21st.—L. V. = J. 1 (slowly). No ophthalmoscopic changes.

28th.—Movements of right eye rapidly increasing in extent. Still considerable proptosis.

29th.—Patient discharged. He was not seen again.

CASE 2. (From notes by Mr. Hinnell.)—William F——, aged two years, was admitted on Nov. 15th, 1886. The history given by the mother was that the child's left eye had been inflamed for a week, and that two days previously the lids had become swollen. The child had refused food, and was feverish and vomited. There was no evidence of injury.

On admission the left eyeball was considerably displaced forwards and slightly downwards. The lids were swollen, tense, and dusky. There was puffiness over the bridge of the nose, and in the left temporal region. Chemosed conjunctiva protruding between the lids at the inner canthus; cornea clear; left pre-auricular gland enlarged. There was swelling of the tonsils and uvula; no suppuration in the former; no membrane seen. Temperature 101·6°.

Nov. 16th.—Ether having been administered, an incision was made through the upper lid below the outer part of the upper orbital margin. Pus was found deep in the orbit. No exposed bone detected. A drainage-tube was inserted and a small poultice applied.

17th.—The swelling is rather less tense. Scanty discharge from the tube. No vomiting. Takes milk well. Morning temperature 100·6°. Warm-water dressing ordered.

23rd.—The swelling is considerably less, and the lids are now quite soft, excepting over a small area around the tube. There is still scanty purulent discharge. The child is much better. Temperature generally normal, occasionally rising to 99° and 100°.

28th.—Drainage-tube removed. Still much displacement of eyeball, but swelling of lids is nearly gone. Chemosis of conjunctiva persists.

Dec. 12th.—The child was discharged from the ward today. Steady improvement has taken place since last note. The patient was not seen again.

CASE 3.—Dorothy M——, aged seven months, was sent to Mr. Lawford at the hospital by Dr. M. Read, on Sept. 26th, 1887. One week previously the child had had a fit; beyond this there was no history bearing on the case. So far as was known the child had received no injury. No evident disease of nose or mouth. The left eyelids, especially the upper, were swollen and tense; indistinct deep fluctuation could be felt; eyeball considerably protruded and movements limited; cornea clear; pupil much larger than that of the right eye, remaining so under chloroform. An incision was made through the upper lid in its outer half, and a probe passed deeply into the orbit, but no pus or diseased bone was found. Warm lead lotion dressings were applied. The incision rapidly healed. Two days later the lids were less swollen and tense, but the proptosis was no less, and there was noticeable downward displacement of the eyeball. The left pupil was still larger than the right. The child seemed well, ate and slept well, and suffered apparently very little pain. On Oct. 3rd the swelling of the lids and proptosis had increased; the child appeared to have very little discomfort. The next day Dr. Read made an incision through the upper lid, and let out about half a drachm of pus. On Oct. 5th, when Mr. Lawford saw the child, this incision had closed. On reopening it a small quantity of dark thin pus escaped. No bare bone could be felt with the probe. The displacement and loss of movement of the eyeball was the same as two days previously. Ophthalmoscopic examination revealed nothing abnormal. Mr. Lawford did not see the child again till Oct. 19th. There was then slight displacement of the eye downwards, but it moved freely in all directions; there was still some thickening beneath the upper orbital rim, and the lid could only be raised half way. The optic disc and vessels were normal. On Nov. 2nd there was very slight downward displacement. Some thickening could be felt about the scar of incision. The child then appeared perfectly well. In April, 1889, Dr. Read wrote that the child had had no recurrence, and had been in good health since the above attack. The left eye and eyelids looked quite normal.

CASE 4. (From notes by Mr. Laws.)—James S——, aged twenty-one, a railway porter, was admitted on March 13th, 1889. On March 8th he had throbbing pain in the right eye, and noticed that it was bloodshot, and soon became swollen. Pain continued till the 11th, then decreased in severity, but the swelling became more noticeable. There was no history of injury; no bad teeth; no discharge from the nostrils. Three weeks previously he had a sore-throat, but it had left no trace in the fauces. He has not had syphilis or gonorrhœa, nor any of the specific fevers. He stated that three years ago his right eye was similarly affected, but recovered in a fortnight.

On admisson, there was considerable swelling of the right eyelid, with marked proptosis; the ocular movements were almost abolished; conjunctiva protruded between the lids; the cornea was clear, pupil dilated (probably by atropine used before admission); media clear; optic disc slightly blurred at the inner edge, and the veins tortuous; vision unaffected. Very little pain or tenderness. There was a doubtful sense of fluctuation above the eyeball. The temperature was normal; pulse 80. Heart sounds clear, but apex beat displaced upwards and to the left. Tongue furred. Urine 1035, acid; high coloured; good trace of albumen; no sugar; no casts; large quantity of crystalline phosphates. The patient was kept in bed and given a purgative of the citrate of potash mixture. Warm lead-lotion dressings were applied to the swollen lids. There was no appreciable change during the next two days. The urine became slightly alkaline; albumen still present. There was no urethritis or cystitis. The temperature was normal.

March 16th.—This morning slight serous chemosis of the *left* conjunctiva, and slight tenderness to pressure on the eyeball. No limitation of movement. Condition of right eye about the same. Proptosis decreasing.

20th.—Proptosis of right eye no less, but there is slight return of movements of the eyeball. Pupil active. Cornea clear. Chemosis of left eye almost disappeared. Urine: alkaline, deposit of amorphous phosphates, no albumen to-day, but a few granular casts.

24th.—Right eye improved in every way. Less proptosis, more movement. Left eyelids slightly swollen. Conjunctiva chemosed.

25th.—Left eye: increased swelling and some evident proptosis; movements of eyeball limited, especially upwards and outwards, but there is no pain. No ophthalmoscopic changes in either eye. On the afternoon of this day the patient's temperature rose to 100·8°, and he complained of pain in the left orbit; nausea, but had no shivering.

26th.—Better. Temperature normal. Pain much less. Left eye now more prominent than right. From this date steady improvement took place. Both eyeballs resumed their normal position and regained perfect movement, and sight in each eye = $\frac{6}{6}$. No ophthalmoscopic changes were visible. Albumen was not found again in the urine. The patient left the hospital on April 15th.

June 25th.—He has been quite well since his discharge.

Remarks by Mr. LAWFORD.—Perhaps the most noticeable feature of these cases is the apparent absence of adequate cause for the cellulitis. In not one was there a history of local injury, and in none could I obtain evidence of disease of neighbouring parts from which inflammation might have extended to the orbital tissues. Case 4 is in many respects the most interesting. Here, in an apparently healthy man, cellulitis of the right orbit appeared without ascertainable cause, and extension to the left orbit took place, though the inflammation was less severe in the second orbit. The occurrence in this patient of albuminuria was remarkable and unexpected, and its disappearance concomitantly with the improvement in the local and general symptoms lends support to the hypothesis that it was in some way connected with the inflammatory processes. It is to be noted also that in this patient there was a history of a somewhat similar attack of orbital inflammation previously. The recovery of all four cases without any extension of the inflammation beyond the orbits, and without, so far as can be judged, permanent damage to the optic nerves is matter for congratulation.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, VICTORIA-PARK.

TUBERCULAR ABSCESS OF LIVER; MILIARY TUBERCLES IN LUNGS; NECROPSY.

(Under the care of Dr. THOROWGOOD.)

THIS case is chiefly interesting from the comparative rarity of tubercle of the liver, some of the abscesses from which attained to unusual size in this patient. The German pathologists describe tubercle as not unfrequent in the liver in the general tuberculosis of children, and specimens illustrating the condition have been shown at the Pathological Society.[1] Tubercle of the liver as a primary deposit is almost unknown. "Miliary tubercles are most frequently met with, and are often present in considerable numbers. Occasionally tubercles of the average size of a pea or a bean are observed. They always present a central cavity full of broken-down tissue and biliary colouring matter, with a capsule of yellowish or greyish tubercular growth."[2]

Francis S——, a labourer, aged twenty-one years, was admitted to hospital on Dec. 27th, 1888. The family history was good. He dates his present illness from a cold, caught ten weeks since. Lately he has become short breathed, has night sweats, and is losing flesh. In general appearance he is fair-haired, not emaciated. Appetite good; tongue rather coated; bowels not open; mucous expectoration with cough. Temperature 101°; pulse 100 (feeble); respiration 20. Urine acid, sp. gr. 1020; no albumen; no sugar.

Physical signs. — Chest fairly well covered. Heart's impulse feeble in the fourth and fifth interspaces in the nipple line. A short systolic murmur is heard over the apex. The hepatic dulness commences slightly above the fifth rib. The liver extends downwards about three inches below the costal margin, it feels fairly smooth, and is very tender. The rectus muscle is not markedly tense. Under the right clavicle much crepitant râles with sibilus can be heard, and under the left clavicle the breathing is fair, a few crepitations being audible. Below the right scapula resonance is impaired, breath sounds are very feeble, and faint friction sounds are audible. The spleen seems slightly enlarged.

The temperature during his stay in the hospital was irregular and wide in its range; usually from 101° to 102°, sometimes 103° to 104°. He had no rigors, and was very dull and apathetic in manner. The skin was sallow, but the conjunctivæ were not yellow, and the urine was free from bile. There had been slight œdema of the feet before admission, but never any ascites. He never had coughed or vomited blood. The question was as to the nature of the hepatic enlargement. The persistent febrile condition and the tenderness over the liver, with smoothness of surface, made Dr. Thorowgood suspect abscess, though there had been no rigors, and the patient had never been in a tropical climate. The absence of marked jaundice, blood-vomiting, ascites, and the very slight enlargement of the spleen were against cirrhosis. The evident disease in the right lung pointed to tubercular mischief, and possibly fatty liver. No remedies had any beneficial effect, though five-grain doses of quinine seemed to reduce the temperature from 103° to 101°. On Feb 27th, 1889, he died, and from the ample record of the necropsy by Dr. Wetherhed, pathologist to the hospital, the following summary is made.

Necropsy, held on Feb. 28th.—The liver weighed 58 oz., was somewhat enlarged, colour pale, congested in patches, substance firm. The upper surface was adherent to the diaphragm, and the lower surface to the duodenum and parts around. Capsule much thickened. The liver was studded throughout with small nodules, varying in size from a pin's head to a large pea. The larger ones were breaking down in the centre, and stained a light green. Some of the cavities thus formed were as large as a chestnut. The contents examined microscopically showed caseous débris and crystals of fatty acids, but no tubercle bacilli could be found. Sections of the nodules showed typical tubercular structure, and in some bacilli were found. There was also a considerable amount of cirrhosis. The glands near the liver were enlarged, and many were breaking down in the centre. The bile-ducts were patent, and no communication could be found between them and the tubercular abscess. There was well-marked peritonitis on the right side, where a small hæmorrhage had taken place. No sign of tubercle in the intestines. Both lungs were full of grey miliary tubercles, and there were no old lesions at the apices.

Remarks by Dr. THOROWGOOD.—The case is of interest as one of tuberculosis of the liver. The disease does not appear common, for Frerichs states that only twice in necropsies of 120 phthisical patients did Louis observe tuberculosis of the liver. In children it is a more common affection than with adults. Dr. Murchison[3] has recorded a case where the liver was enlarged to 77 oz. from miliary tubercles scattered through the glandular tissue; the surface generally was smooth. Cirrhosis, or interstitial hepatitis, is known to be a complication of tuberculosis, but according to Frerichs[4] there is no symptom during life indicative of tuberculosis of the liver. A section of the liver in this case was shown by Dr. Wetherhed as a card specimen in May last at the Pathological Society.

[1] Dr. Hale White: Trans. Path. Soc., vol. xxxv., p. 220. Dr. Norman Moore: vol. xxxiv., p. 133. Dr. N. Dalton: vol. xxxvi., p. 235. Dr. Goodhart: vol. xxvii., p. 196.

[2] Bristowe: Theory and Practice of Medicine.

[3] Lectures on Diseases of the Liver, p. 140.

[4] Diseases of the Liver, vol. ii., p. 221.

Reviews and Notices of Books.

The Treatment of Epilepsy. By WILLIAM ALEXANDER, M.D., F.R.C.S. Edinburgh and London: Young J. Pentland. 1889.

SOME years ago the author of this work, influenced by the vascular theory of epilepsy, proposed and practised ligation of the vertebral artery as a means of cure of this most incurable of diseases. He has abandoned this treatment, of which the results were not so satisfactory as he had anticipated. He now comes forward with another, and even more formidable, surgical procedure which in his hands seems to bear greater promise. Nor has he hastily arrived at this conclusion, since some of his operations were performed as long as six years ago—a sufficiently long lapse of time to note the good effect, if any, of the operation. This consists in the removal of the superior cervical ganglion with the theoretical object of altering the nutrition of the brain through its vascular supply, and is applicable therefore to whatever view of the nature of epilepsy may be accepted, whether, that is, the primary seat of the disturbance be considered in the medulla (Van der Kolk) or in the cerebral cortex (H. Jackson). Dr. Alexander frankly admits that the procedure is based upon theoretical reasonings; and for some time he naturally hesitated to perform an operation which, according to experimental physiology, should lead to very marked disturbance in circulation and nutrition. However, he set to work to practise its details on the cadaver. His first case—one of facial tic and spasm, which he found to be relieved by pressure on the carotid—proved to be successful, and unattended by deformity or inconvenience beyond slight drooping of the eyelid and contraction of the pupil on the side of the operation. The general description of the operation is best given in the author's own words (pp. 22 and 23):—

"The patient should be anæsthetised with chloroform instead of ether, to avoid congestion of the veins of the neck. The head is placed on one side, and the part to be operated on exposed to a good light. An incision is then made three inches in length, from half an inch in front of the mastoid process, just below the ear, straight down the middle of the sterno-mastoid muscle, until we are stopped by the fear of wounding the external jugular vein. The fibres of the muscle are separated until the sheath and fascia beneath are reached. The sheath is cut through, and the inner side of the wound is drawn well inwards and lifted up. The fascia now seen at the bottom of the wound is also cut through, care being taken not to wound the internal jugular vein. This vein is pulled well inwards with a retractor, when the internal carotid artery will come into view, and the superior cervical ganglion will be

seen lying behind it. The ganglion will be easily recognised by its greyish colour and its large size, which rapidly diminishes into a thin cord as we follow it downwards. This cord should be cut below, the lower end of the upper fragment seized by the forceps, and the ganglion freed from its connexion as high up as possible, by snipping with fine blunt-pointed scissors that cut well out to the end. When the ganglion is freed as far as possible, its upper connexion may be most safely and readily severed by traction. Some carbolic lotion is now used to wash out the wound, the inner side of the incision, which has been retracted, is allowed to fall outwards in apposition with the opposite side, after a drainage-tube has been introduced, and the wound dressed with gauze, sublimate wool, or any other antiseptic dressing."

It is needless to remark how much care is required by the operator to avoid injuring the important vessels and nerves which he will encounter in the course of his dissection. Dr. Alexander does not minimise these dangers, and gives many practical directions for their avoidance. He gives details of twenty-four cases of epilepsy thus treated, and after an interval of from four to six years reports of them that six were cured, that ten were improved (especially in their mental condition), and five unimproved. None were made perceptibly worse by the operation; but two died shortly after its performance (not, however, from its direct effects), whilst of one case no further information was obtained. He claims, therefore, that a percentage of recoveries amounting to 25 is an advance on the ordinarily admitted "cures" of epilepsy (7 per cent.) by medical treatment, whilst he avers that they were actually the cases most unfavourable for the latter treatment which recovered under his plan.

Extirpation of the cervical sympathetic ganglia in the human subject might be expected to prove of great physiological importance, since, as is well known, so many striking effects have been observed to follow this operation in the case of animals. It is, however, remarkable how slight were the phenomena observed in Dr. Alexander's cases, and how few of those noted by the experimental physiologist were present. As regards ocular phenomena, a contracted pupil and drooping eyelid were noticeable (but to a very slight extent, as the numerous photographs inserted in the volume show) only when one ganglion was excised. When both ganglia were removed the eyes seemed almost normal, and in neither case was the contractility of the pupil affected; no lacrymation, no evidence of impaired nutrition of the eyeball in any part resulted; whilst as to graver effects, no glycosuria and no cardiac phenomena were ever observed. Nor even was there any notable flushing of the face or rise in temperature, and yet it is remarked that in the cases where opportunity was given by a post-mortem examination an increased vascularity of the pia mater on the side of the operation was apparent. Physiologically, then, this operation has not added much to our knowledge of the function of the cervical sympathetic, except in the way of diminishing its importance in the human subject; whilst from the point of view of the surgeon it is satisfactory that so slight disturbance is occasioned by what *primâ facie* would be considered a very serious interference with the normal mechanism.

Dr. Alexander adds chapters upon Trephining for Epilepsy, and on the medicinal and dietetic treatment of the disease. He points out how detrimental to the general health is the continued and excessive use of bromides, and how few other remedies have any control over epilepsy. "Routine," he says, "is the curse of this disease, and routine generally means bromide." His new method of treatment is certainly calculated to startle us out of such routine. He has found that percussion of the spine (with a mallet over a rubber pad) from the lumbar to the cervical region will afford temporary relief in arresting the fits, and that this procedure may be employed together with galvanism, but that it has no curative power. An interesting chapter upon the General Management of Epileptics contains a description of the home at Maghull. Lastly, there is a chapter on Morbid Anatomy, consisting of details of many cases of tumour, and many of true epilepsy, but in only two, it is remarked, could "brain surgery" have had any reasonable chance of success.

OUR LIBRARY TABLE.

Lectures on the Errors of Refraction and their Correction with Glasses. Delivered at the New York Post-graduate School by FRANCIS VALK, M.D., Ophthalmologist to the New York Dispensary. Pp. 241. New York and London: G. P. Putnam's Sons. 1889.—These lectures are written in an easy and intelligible manner, and contain all, or more than all, the well-educated student need know, unless he is intending to make ophthalmology his special branch of practice. The author remarks very justly that, whilst many things may be learnt from writers, to obtain perfection in the correct detection of the errors of refraction the eye and hand must become accustomed to do their work, just as the skill of the artisan is shown by his manual dexterity in the work that he performs. He adds dryly that he has known some of our best ophthalmologists to differ very essentially on the degree of refraction when they estimate it with the ophthalmoscope. He commences with a description of the orbit, which is correct enough except that the cart is put before the horse in regard to the floor, which is said to be "formed partly by the bones from the inner wall, except in front by a portion of the malar bone, and near the apex by a part of the palatal and superior maxillary bone." The last-named bone should have been named first as constituting the major part of the floor, then the malar and palate bones, and last, as least important, the slight participation of the inner wall. The optic nerve is described as having only one nerve-sheath, a continuation of the pia mater. Why is the dural sheath omitted? The principal properties of lenses are then given, and the following chapters are devoted to Emmetropia, Hypermetropia, and Myopia, and to Ophthalmoscopy. The accounts of these states are of course accurately given, in some cases in a rather colloquial style, but in a way that will render the book useful to all ophthalmological students.

Archiv für Pathologische Anatomie und Physiologie und für Klinische Medicin. Herausgegeben von RUDOLF VIRCHOW. Band cxvi., Heft. 1 and 2. Berlin: G. Reimer. 1889.—The contents of these two parts of "Virchow's Archiv" consist of the following papers:—1. Elasticity of Arteries (healthy and diseased), by Professor Thoma and N. Kaefer (stud. med.). 2. Blood-plates (Blutscheibchen) are Constant Elements of Normal Mammalian Blood, by Dr. C. Laker. 3. Experimental Researches on the state of Intestinal Movements in Lowered Temperature of the Body, by Dr. C. Ludovitz. 4. On Hyaline Changes of the Skin produced by Freezing, by Dr. H. Kriege. 5. On Xanthoma Multiplex, Planum, Tuberosum, Mollusciforme: I. Clinical, by Dr. G. Lehren; II. Anatomical, by Dr. K. Krauss. 6. On Tuberculosis in Vertebrates, by W. K. Sibley. 7. On the Theory of Suppuration, by Dr. P. Grawitz. 8. The Origin of Stenosis of the Air-passages in Tracheotomised Children, by Dr. W. Fleiner. 9. On Nerve Lesion and Loss of Hair with respect to Alopecia Areata, by Dr. G. Behrend. 10. A Historical Sketch of Early Medicine in Rome, by Dr. Saalfeld. 11. Spontaneous Pulmonary Hernia in Adults, by Dr. Strubing. 12. The Action of Astringents, by Dr. Heinz. 13. Relation of Motor Ganglion Cells of the Spinal Cord to the Peripheral Nerves, by Dr. von Sass. 14. On Defective Skulls, by J. Fridolin. 15. Bacteriological Reports on Green Sputum, by A. Frick. 16 On Mycosis Fungoides, by W. Dönitz and O. Lassar. 17. Fibrous Tubercle caused by Ova of Parasites, by Dr. Miura. 18. Notes on the Pathology of

the Blood, by Professor Neumann, and a few minor contributions.

Medical Bookkeeping.—We have received for review a prospectus of Mr. P. B. Ferdinand's system of "medical bookkeeping," which describes an attempt to combine an account book and a case book in one set of documents. Strictly speaking, Mr. Ferdinand's invention is not a system of bookkeeping in the business sense, but a particular form of that very useful object, a nest of "pigeon holes" for the orderly preservation of papers. It is designed to receive a number of dockets, in which the memoranda for case book and account book may be noted down and preserved for easy reference. The dockets, being sorted out into distinct compartments arranged in alphabetical order, can be easily found when wanted and carried on his rounds by the medical practitioner in his pocket-book, a suitable form of book being supplied with the apparatus. Thus the medical man has the great advantage of having so much of his case-book as he wants to refer to always at hand, and the want which a busy man always feels of facilities for refreshing his memory as to the history and details of a case is very successfully supplied. The system, the apparatus connected with which may be obtained of the firm of Thompson, Walters & Co., Curtain-road, E.C., seems to be capable of being worked without very much trouble, and we cannot doubt that it will prove to be of great utility.

Dictionary of National Biography. Vol. XIX., Finch—Forman. Edited by LESLIE STEPHEN. London: Smith, Elder, and Co.—The nineteenth volume of this important work contains 474 biographical sketches, commencing with Anne Finch, Countess of Winchilsea (d. 1720), poetess, and ending with Simon Forman (1552–1611), astrologer and quack doctor. The College of Physicians summoned him in May, 1593, for practising without a licence, maintaining that he was laughably ignorant of both medicine and astrology. Forman, who declared that celestial signs and aspects gave him all the information about diseases that he required, was fined £5, and interdicted from the practice of medicine. Forman was several times afterwards imprisoned and fined for the illegal practice of medicine. Amongst the medical biographies in this volume, we notice William Webster Fisher (1798–1874), William Henry Fitton (1780–1861), Alexander Fleming (1824–1875), Malcolm Flemyng (d. 1764), John Fletcher (1792–1836), Valentine Flood (d. 1847), Sir Charles Fergusson Forbes (1779–1852), James Forbes (1779–1837), and John Forbes (1799–1823).

New Invention.

A NEW SPONGE ELECTRODE FOR GENERAL FARADISATION.

THE annexed woodcut represents an electrode which I have devised for applying general faradisation. It consists of three parts: a knob (A), containing a female screw, a metal plate from the centre of which rises a male screw (F), terminating in the binding screw (B). A wooden disc (C), on whose lower surface is cut a groove to receive the turned up edge of the plate (G). This disc is cut at its centre in a hole large enough to allow the male screw (F) to travel easily within it. To insert the sponge spread it out flat upon the table, and place the electrode upon its centre, the knob (A) having been unscrewed as far as it will go, and the male screw pushed down, thus leaving a gap between the plate (G) and the wooden disc (C). The relative positions of the electrode and sponge are shown in Fig. 1, which exhibits a side elevation. The edge of the sponge is now tucked in all round with a paper knife into the gap between the edge of the plate and the wooden disc, or body of the electrode, and the knob (A) is screwed well home. To remove the sponge the process is reversed. Fig. 2 shows a section of the electrode with the sponge in position, the edge of the sponge being firmly held between the turned up edge of the plate (G) and the rebate on the under surface of the wooden disc. The sponge must be circular and trimmed to the thickness of about an inch and a half in the centre, thinning to about half an inch at the extreme edge. The advantages of this electrode are: 1. Its size is

Fig. 1.

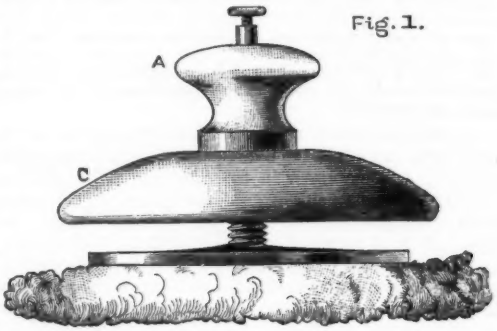
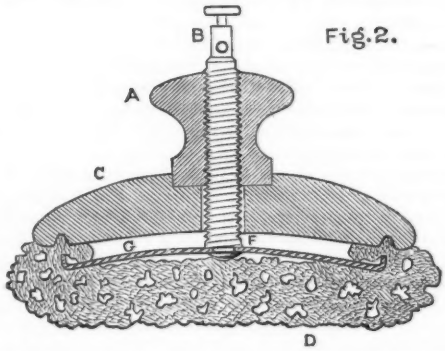


Fig. 2.



large (4½ in. to 5 in. in diameter). 2. The ease with which the sponge can be removed and replaced. 3. Its firmness, which enables a considerable amount of massage to be performed with it. In using it the palm of the hand is placed flat upon the upper surface of the wooden disc, the knob being grasped between the roots of the thumb and forefinger. It is made by Schall, of 55, Wigmore-street, W.

GEORGE HERSCHELL, M.D. Lond.

West-street, Finsbury-circus, E.C.

LECTURES ON CHEST DISEASES FOR ADVANCED STUDENTS.

To the Editors of THE LANCET.

SIRS,—May I be allowed to draw the attention of the profession to the fact that the Committee of Management of the City of London Hospital for Diseases of the Chest, Victoria-park, have recently consented, at the urgent request of the medical staff, to allow the practice of the hospital to be made available to practitioners and students, on the payment of a small fee, for systematic instruction in the diagnosis and treatment of chest diseases? The practice is extensive; it comprises a service of 164 beds, and an out-patient department attended by about 14,000 cases a year. There appears to be a considerable demand for post-graduate instruction in the chief subjects connected with clinical medicine, but as the material at our disposal at this hospital is unsurpassed, as far as the subject of chest diseases is concerned, there should be no difficulty in meeting it. For senior students, too, the opportunity thus given of studying a large number of cases of chest diseases must be of great value.—I am, Sirs, yours very truly,

VINCENT D. HARRIS, M.D., F.R.C.P.,
Physician to the Hospital.

Wimpole-street, W., Aug. 5th, 1889.

THE LANCET.

LONDON: SATURDAY, AUGUST 10, 1889.

THE conception of tuberculosis gained by the memorable discovery of the bacillus by KOCH in 1881 is being rapidly pushed to its extreme logical conclusion. For it is remarkable how widespread is the acceptance of the belief, based on that discovery, that this morbid state, which manifests itself in so varied a manner, according to the tissue or organ that is primarily attacked, depends upon the introduction of this parasite into the body. The disease thereby takes a definite position amongst the infective class, since, so far as present knowledge goes, all diseases owning an ultimate cause in an organised virus are communicable. It does not matter for the argument whether—as undoubtedly would appear to be the case with regard to tuberculous affections, and as is probably true of the whole group of specific infective disorders—the victims selected have been already predisposed by heredity, environment, or otherwise to become a favourable soil for the growth of the parasite. This is a question which ought not to enter into the consideration of the preventive measures to be adopted, except in so far as it is necessary to secure that individuals so predisposed are placed under conditions the most favourable for the maintenance of general health. For it is conceivable that under certain transitory conditions an individual not predisposed may yield to the attack of this ubiquitous parasite. No better illustration could be given of the manner in which the bacillary doctrine of tuberculosis now dominates the scientific world than the fact that in Berlin, Paris, New York, and Glasgow there have been recently published declarations, police regulations, reports and judicial decisions, all of which turn upon the acceptance of this doctrine as an assured fact, with the corollary affirmation of the transmissibility of the disease from man to man, and from animals to man. The result is, and can only be, on the admission of this teaching as a proved scientific truth, the enforcement of prophylactic measures of the most stringent kind, such for example as have been widely promulgated during the past week by the Committee of the Paris Congress on Tuberculosis, constituted by many eminent men, an enumeration of which will be found in another column. The policy adopted is "thorough" enough to satisfy the most ardent hygienist; but he indeed would be sanguine who could hope to see even a tithe of these recommendations carried out in practice. For, owing to the complex conditions of civilisation, to the sentiment of humanity, as well as to the affections of the family circle, it is obviously impossible to obey these harsh, if wholesome, dictates of science. In the abstract, doubtless, such recommendations are logical and reasonable; in their application to the prevalent conditions of human existence they will fail by their own impracticability. We talk of the segregation of lepers as the one efficient method for restricting the spread of that scourge of subtropical lands, and perhaps we could realise what that implies if we applied the same measure to subdue the ravages of a disease which in its extent and its fatality ranks far above leprosy. Yet, to be logical, to the one disease should be meted out the same measure as to the other, or the millennium of hygiene will never arrive.

We have stated the matter thus broadly, not because we either mistrust the evidence upon which the conclusions of the Paris Congress were based, or question the validity of these conclusions, but merely in order to point out the practical impossibility of acting upon them. Nevertheless there are directions in which it may be possible to carry out with fair prospect of success the most rigid requirements of the Congress, provided of course that there is good ground for the execution of such measures. It may, indeed, be impossible to protect mankind from tuberculous infection through individuals in the same way as is done in the case of contagious disease generally; but if it be true that much of human tuberculosis is derived from the lower animals, it is at least comparatively easy to close this avenue of contamination. Not long ago it was maintained that bovine and avian tuberculosis were diseases of a nature distinct from human tuberculosis. Even since KOCH'S discovery this contention has been upheld, based now not merely upon gross anatomical differences, but on the infinitely more minute differences in the morphology of the bacilli that are met with in various kinds of animals. However, this view has now been practically abandoned; and, in his recent report to the Agricultural Department, Professor CROOKSHANK dealt it the *coup de grâce*. It appears incontestable that the morbid condition known as tuberculosis is of the same kind in man as in those animals which are specially prone to it, some of which, such as cattle and poultry, form in many ways staple articles of human food. It has been abundantly proved that any portion of tubercular products administered to animals (prone to tubercle) in food or by inoculation will reproduce the disease in the latter; so that it would, with our present knowledge, be an act amounting to a crime to give an infant milk from a cow suffering from tubercular mammitis. Yet who knows how often this has been done in the past, or how much of infantile mortality from tabes mesenterica may be attributable to the direct introduction into the alimentary canal of the parasite—a result which would have its analogy in the induction of an attack of typhoid fever from the ingestion of water contaminated with the typhoid virus or of trichinosis from the ingestion of a piece of raw, measly pork.

The Paris Congress of 1888, of which the Transactions[1] have just appeared, advanced this question a stage further, supporting it by many and forcible arguments, as may be judged by the following resolutions passed at the meeting: "It is imperative that every possible means should be adopted, comprising compensation to parties interested, for the general application of the principle of seizure and general destruction in totality of all flesh belonging to tuberculous animals, no matter how slight the specific lesions found in such animals." (Page 156.) And again: "The Congress expresses the wish that tuberculosis be included in the sanitary laws of all countries in

[1] Congrès pour l'Étude de la Tuberculose chez l'Homme et chez les Animaux. 1re session, 1888. Comptes Rendus et Mémoires. Paris: G. Masson. 1889.

the world amongst contagious diseases requiring special prophylactic measures" (p. 716); whilst the French Government, at the very time of the session of the Congress, promulgated a decree enjoining the destruction of carcases in which the tubercular lesions were limited to parts of the body. This is the question which recently excited so much interest in Glasgow, where a judicial inquiry, lasting over many days, was made for the purpose of enforcing the order of the local authority for the destruction of two animals condemned as unfit for human food on account of the presence in them of such limited evidence of tubercular disease. The questions of scientific investigation were submitted to the close analysis of legal advocates, and expert witnesses were called to give evidence on both sides. The views of the Paris Congress prevailed, and KOCH'S bacillary theory, with all its consequences, has received judicial sanction at the hands of Sheriff BERRY, who upheld the local authority, and declared that the flesh (in itself having the appearance of health) of a tuberculous animal is unfit for human consumption. The inquiry was one of great interest and importance, and the evidence given deserves to be widely studied.[2] As it is impossible in the space at our disposal to lay the matter fully before our readers, we propose to return to the subject next week. Meanwhile, it is needless to point out the influence that this decision may have, since tubercular disease in one form or another is perhaps the commonest affection from which cattle suffer; and the general application of the principle therein laid down may necessitate a considerable change in arrangements connected with food supply as well as in sanitation generally.

WE hope that our readers have carefully weighed the facts and arguments so well stated by Mr. HOWARD MARSH in his lectures at the College of Surgeons, an abstract of which we published in our issue of July 27th. There are few, if any, subjects of greater importance to a British surgeon than that of tubercular disease of bones, joints, and glands, and this importance does not arise solely from the number of patients affected, but quite as much from the destructive nature of the disease in many cases, and also from the wide range of variety in course and consequences that it exhibits. The progress of pathological discovery has largely affected the prevalent practice in this branch of surgery. So long as tubercle was regarded as a constitutional affection with local manifestations, treatment was directed mainly to the constitution, and it was regarded as useless to remove a mere local manifestation if the essential disease or morbid condition were left behind. Then came the discovery of the infective nature of tubercle, and the danger of a limited caseous deposit becoming a source of fatal infection for distant organs or for the whole body was impressed upon surgeons, and the expediency of operations for the removal of tubercular deposits was discussed. And when, in 1882, KOCH announced that he had demonstrated the existence of a specific bacillus in connexion with tubercle, a powerful impetus was given to the local treatment of all tubercular diseases. It is, unfortunately, only too true that scientific men, like ordinary mortals, are largely swayed by "fashion." The prevailing "fashion" in modern medicine is a belief in micro-organisms as a potent factor in disease. And so, advancing far beyond what has been demonstrated with proper precision, there are many among us who speak as if micro-organisms were the sole factors in disease and the undoubted cause of all infective maladies. They would also disregard all clinical experience which is opposed to the prevailing pathological dictum. Many recent statements as regards the treatment of surgical tuberculosis show the tendency there is to be influenced by one phase only of pathological truth, and the danger of making a partial view of the nature of a disease a guide in its treatment.

Mr. HOWARD MARSH has done excellent service in calling attention to this matter as regards tubercular disease of the hip, and his lectures ought to have a powerful influence in modifying what may be called the most modern practice in this department of surgery. Mr. CROFT has now for some years been an earnest advocate for early excision of the hip, and has formulated the simple rule that the presence of pus in connexion with morbus coxæ should be taken as a sufficient indication for this operation. Mr. BARKER goes even further than this, and, adopting an explanation for the non-success sometimes attending this practice, which is very common in surgical writings, he states that if evidence of suppuration is waited for the surgeon will often operate only late in the disease, and too late for a full measure of success to attend his efforts. He urges that as soon as the surgeon suspects caseation of the inflammatory products he should proceed to excision of the joint. Mr. HOWARD MARSH, on the other hand, would limit operative interference to the opening of abscesses, and trusts to prolonged rest, with extension and fixation, and general hygienic precautions. He gives statistics to show that the danger of general or distal tubercular infection from bone and joint disease has been exaggerated, and that it is known to occur in only about 5 per cent. of all cases of hip disease. He is strongly of opinion that the tubercular process in bone has a great tendency to be self-limited and to undergo recovery, and that in some cases suppuration is but nature's method of throwing off dead tubercular matters—sequestra he calls them,—and must not be regarded as a destructive process at all. But his case becomes stronger still when from pathological evidence he appeals to actual clinical experience. Against a mortality of 20 per cent. he has to set one of 5 per cent., and while the advocates of early excision have to record a large number of partial successes and shortened enfeebled and distorted limbs, Mr. MARSH is able to show a much higher percentage than they do of strong, firm, fully movable limbs of proper length.

Mr. MARSH might have supported his views by much collateral evidence, particularly perhaps from cases of caries of the spine. He does not in his lectures deal with one argument that is sometimes urged by the advocates of early incision—that of time. They point out that for the wealthy and for the few poor who can obtain admission to institutions such as the Alexandra Hospital, where patients are allowed to stay as long as they require treatment by rest, this rest treatment is all very well. But how about the number of poor who crowd our general hospitals, where a time limit

[2] *Tuberculous Meat.*—Proceedings at trial under petitions, at the instance of the Glasgow Local Authority, against Hugh Couper and Charles Moore, before Sheriff Berry. Glasgow: W. Hodge. 1889.

is enforced? Is it not far better to take their cases in hand early and excise the joint and send them home in a month or two than expose them to the perils and disappointments of an imperfectly carried out rest-treatment? This is, of course, an important point, but we cannot admit that it is a satisfactory reply to Mr. MARSH. If the final result of early excision both as to life and to utility of limb were as good as that obtained by prolonged rest, then a treatment demanding only weeks or a few months might be preferred to one involving years, even although a serious operation had to be performed. But the case is not so. The mortality attending early excision at present is four times greater than that following the opposite practice, whilst the mutilation resulting in those who survive is often severe. Of course Mr. MARSH'S vigorous attack will be followed by an equally vigorous defence; and we cannot doubt that the result of discussions of the subject by men so able, so painstaking, and so conscientious, will be of great benefit to the suffering children of our crowded towns.

IN the current number of the *Nineteenth Century*, Dr. BURNEY YEO discusses the well-worn but never uninteresting topic of change of air. There is something suggestive in the mere phrase itself. We do not so commonly speak of change of place or change of scene as of change of air, implying, correctly enough, that it is to an altered atmospheric condition that we look mainly for physical benefit. The German phrases "Luftkur" and "Luftkurort" carry the same implication; and if our faculty for adapting our own language to express new scientific ideas equalled that of our Teutonic neighbours, we, too, might speak of "Air-cure" and "Air-cure-place." Air and food are the materials out of which the organism is built up and maintained, and change of air has a necessity and a utility comparable to variety in diet.

The first kind of change that naturally suggests itself is change from town to country. While Dr. YEO quotes almost with approval the saying of a well-known physician, that he knew "no place so good as London to live in for ten months of the year, and no better place for the other two"; yet we are all practically agreed that a change from the smoky and germ-laden atmosphere of large cities to the pure air of moor, mountain, or seaside is for most persons as necessary as it is undoubtedly pleasurable. Without going the length of the witty philosopher, who opines that

> "All that's great and good in men
> Has its source in oxygen,"

we must admit that without a more abundant supply of oxygen than is afforded by the exhausted atmosphere of our great towns we cannot hope to preserve permanently full vigour of brain and muscle. The delight with which the child hails the departure for the summer resort by mountain or sea, the immense tide of excursionists which flows on each public holiday along the various channels of exit from London and other great centres, the yearly increasing facilities afforded for travel, all tell the same tale of a great need and of the pleasure that attends its satisfaction.

Of the tonic and restorative qualities of sea air, Dr. YEO says truly that nothing new remains to be noted. He goes on to point out the less favourable effects which sometimes follow recourse to the seaside: "Disturbances of the functions of the stomach and liver may frequently be observed in some nervous sensitive subjects when they are dwelling on the seashore, and a seaside dyspepsia accompanied by great nervous depression is not a very rare affection. These disturbances may, however, often be avoided by those who are sensitive to them, by the selection of a coast resort where they can conveniently live at a little distance from or above the sea. It is in those resorts where the visitors have to live on a level with and literally by the sea that these unpleasant consequences are especially observed."

In common with all other authorities, Dr. YEO regards a sea voyage as affording one of the most perfect and healthful types of change of air. He recommends sea voyages "in those cases of anomalous nervous affections, unconnected with organic disease, that are induced by overwork, worry, and anxiety, and often associated with disorder of the digestive organs." Again, "instances of slow, protracted, and incomplete convalescence from acute disease, from surgical operations, &c., are occasionally greatly helped towards complete recovery by a sea voyage, more especially if the persons concerned have a natural fondness for the sea, and do not contemplate the life on board with dread and distaste. To young persons approaching adult age and suffering from debility, the consequences of over-growth, or over-educational strain, or dependent on other depressing influences, a condition which often appears to threaten to terminate in serious disease—to such a long sea voyage is often of essential service."

On these points there will, we conceive, be general agreement. Much more disputable is Dr. YEO'S low opinion of the utility of sea voyages in phthisis. He believes their repute in this affection is almost solely due to the good results which commonly attend a voyage in cases of the debility of adolescence alluded to above, where "incipient consumption" is often erroneously believed to exist. Subtracting such cases, he believes that the residue—i.e., of cases of phthisis decidedly benefited by a sea voyage—is "surprisingly small." This is an opinion so opposed to general experience, and concerns a matter of such vital importance, that it may be worth while to formulate some of the evidence upon which sea voyages are relied upon as a valuable remedial agent in phthisis. Dr. WILLIAMS reports as the outcome of his experience that "the results of sea voyages were that 89 per cent. of the patients improved, 5½ per cent. remained stationary, and 5½ per cent. became worse." He adds the very important remark that "this is the most favourable of all our climatic experiments." Dr. WALSH, after stating that he regards a long voyage as "a remedial measure of real value," goes on to say that "in not a few instances he has known the Australian voyage followed by practical recovery." Dr. DOUGLAS POWELL writes: "The sea voyage is unquestionably a most successful means of climatic treatment in suitable cases." This evidence might easily be multiplied tenfold, so we can hardly follow Dr. YEO in his unfavourable estimate of the sea voyage. We need hardly say that we agree heartily in what he writes regarding "the impropriety, unwisdom, and in some instances the positive cruelty of sending feeble persons, the subjects of advanced consumption, to encounter all the

vicissitudes, risks, and occasional hardships of a long sea voyage." This warning is no doubt still necessary.

Dr. YEO concludes with some remarks on the winter resorts, such as Madeira, Las Palmas, Orotava, and the Mediterranean sanatoria. We are quite in accord with all he says about the necessity of being on our guard against the defective hygiene of so many foreign resorts. Happily there is reason to hope that a steady change for the better is in progress in many places.

IT was hoped by the Government that the Notification Bill would come on in Committee on Monday night, when Sir WALTER FOSTER would have had the opportunity of bringing forward his amendment for restricting the duty of the medical practitioner in attendance on an infectious disease to certifying its nature. We cannot regret the delay which will secure attention to the amendment; it should be utilised by all practitioners in urging on their representatives to give it their support. The Government, of course, is master of the situation, and has a very obedient majority at its back. But we still hope that Mr. RITCHIE will consider the great reasonableness of the position taken up by the medical profession. According to Mr. STOREY, the profession cares more for half-crowns than for the merits of this question, and the unfitness of the duties which the Bill as it stands will impose on them. We will not credit Mr. RITCHIE with such an erroneous estimate of the feelings of medical men. We prefer to urge on him the advantage of conciliating them and preserving their hearty interest in the great measure of which he has charge, and which, like others, will redound to the honour of his name. We will enumerate the points which constitute the strength of Sir WALTER FOSTER'S position. The duty sought to be imposed on medical practitioners is an inconvenient and incongruous one. They are a busy class of men, and in attending to one case may have a dozen more needing their prompt attention. In such circumstances it is unreasonable to expect them to notify—that is, forthwith to send a communication to the sanitary authorities with particulars of the case, the patient, his situation, and his responsible relatives. No such duty is required of the medical man in the case of death. He is required to certify the facts. But the transmission of the certificate—in other words, the notification—is left, and with perfect success, to the householder or parent. It is said, of course, that there are not the same guarantees as in the case of death, where interment cannot take place until registration is certified. And there is something no doubt in this difference. But there is not enough to justify, at any rate as a first experiment, the plan of requiring notification from the medical man as well as from the householder. It will be easy enough to add the dual notification if the single fails. But the latter should have a fair trial. And we can promise Mr. RITCHIE that the system shall have every assistance and encouragement from the medical profession, who have never been backward in subordinating their own interests as a profession in the cause of public health. Much is to be gained in this matter by conciliation. The invasion of the privacy of the household and of personal and domestic liberty is a matter on which hot haste and iron compulsion would be unreasonable. Time will in any case be necessary to educate the people to a knowledge of the law and to acquiescence in it; it cannot be borne all at once. Mr. RITCHIE shows his own sense of this in a way that we do not approve. He stops short of making the Act applicable at once to all places. He temporises, and leaves it to the local authorities to accept or reject it as they please. This is scarcely fair; as all the care of one place to secure notification may be frustrated by the carelessness of an adjoining place that refuses to "adopt" the Act. There is too much of this sort of legislation nowadays, as if the House of Commons were timid and distrustful of its own authority. The really wise course is to make the Bill universal in its application, and to secure that the machinery of its working shall be such as to cause least friction. We appeal to Mr. RITCHIE to try single notification first, which is believed by Mr. BIDDLE and others to have been proved to operate most effectively. This concession would secure the passing of the Bill this session, which otherwise might be doubtful.

Annotations.

"Ne quid nimis."

VACCINATION AND SMALL-POX MEMORANDA.

AT the present time, when the value of vaccination as a prophylactic against small-pox is under the consideration of a Royal Commission, a few memoranda, although dealing with well-known facts, may from time to time be conveniently recorded. In the first place, we note that Dr. B. A. Whitelegge gives, in his annual report for the borough of Nottingham, an account of recent small-pox outbreaks which may well shake the faith of those modern enthusiasts who want to rely on irksome and as yet illegal systems of quarantine and isolation, and to abandon vaccination. The first occurrence of small-pox referred to was in December, 1887, in which case nothing was heard of the malady, even under a system of compulsory notification, until a number of people in Nottingham had been infected and the disease had been conveyed to Ilkeston in a fatal form, to Stoke-upon-Trent, as well as to other places. Fortunately, by the aid of vaccination, in addition to measures of isolation, the spread of the infection was stayed. In all, 61 cases are reported on, and the greater comparative incidence of the disease upon unvaccinated persons, and the excessive mortality among that class, were manifested, to use Dr. Whitelegge's words, "in the usual startling way." In the first place, revaccinated persons were entirely exempt from attack. There were 41 attacks amongst those who had been vaccinated in infancy, all but 2 being over ten years of age; of these, 6 died, including a man aged thirty-eight, who bore no characteristic marks of vaccination. Amongst the unvaccinated, 14 were attacked, 9 of the attacks being under ten years of age, and of these 6 died. Six of the patients had been vaccinated after infection, but none of them died. No death of a primarily vaccinated person took place under twenty years of age, whereas half the fatal unvaccinated cases were under five years of age. This question of age-incidence of the disease should altogether dispose of the contention that sanitary improvements lie at the root of the diminution of small-pox in this country, for sanitary influences have, as regards other diseases, been at least as much marked in their influence for good amongst children as in any other class. From Bristol Dr. D. S. Davies supplies information as to 327 cases of small-pox which occurred between August, 1887, and July, 1888. With regard to the incidence of death

according to quality of vaccination, the attacks are divided into two groups according as the patients were under or over fifteen years of age. First, as to those under fifteen. In 20 attacks amongst the unvaccinated or doubtful there occurred 11 deaths, this being at the rate of 55 per cent. of the attacks; whereas amongst those having vaccination marks, whether one or more, only one fatal attack occurred, and this was in the case of an infant ten weeks old who had only been vaccinated one week before admission—namely, after contracting the disease. Above fifteen years of age the deaths to attack were as follows:—Amongst 33 unvaccinated or doubtful, 14 deaths; amongst 49 with one or more bad marks, 7 deaths; amongst 18 with one good vaccination mark, no deaths; amongst 78 with two good vaccination marks, 1 death; amongst 39 with three good marks, no death; amongst 22 with four good marks, 2 deaths, one being associated with premature confinement, which is almost invariably a fatal complication; and, lastly, amongst 2 with more than four good marks, 1 death occurred. Thus, whereas out of 82 who were unvaccinated, doubtful, or who had only one or more bad marks, 21 died; there were only 4 deaths out of 159 cases at all ages with one or more good primary marks. Dealing next with the character of the disease as affected by age, it appears that 5 unvaccinated cases were met with under twelve years of age, and all these had the "severe" form of the disease—that is to say, a confluent or semi-confluent attack,—no vaccinated child under twelve years having anything but a "mild" or discrete attack. Above twelve years there were 54 cases of "severe" small-pox, 46 of them being amongst either the unvaccinated or those not possessing more than two vaccination marks. There were 6 cases of hæmorrhagic small-pox; 3 were amongst the unvaccinated, and the other 3 amongst the "badly vaccinated."

"SPONDYLALGIA."

DR. MAX BUCH describes in a preliminary communication to the *St. Petersburger Medicinische Wochenschrift* a nervous cardialgia, the pain in which he discovered to be strictly confined to the anterior surface of the vertebral column, and to be caused by pressure. The pain is so exclusively due to pressure upon the bone that in those of his forty cases in which it was referred to the epigastrium the result of pressure over this region was not merely absence of pain, but rather a feeling of comfort, while pressure on the vertebral column in the umbilical region caused not only local pain, but a neuralgia also, radiating into the epigastrium, and exactly corresponding with the spontaneous pain. Spondylalgia may, according to Dr. Buch, reach as far down as the sacral promontory; in which case, however, some parts of the vertebral column are usually more sensitive to pain than others, or special localities alone are sensitive to pressure. Spontaneous pain also may affect the whole column, and patients often complain during attacks of gastralgia of a pain affecting both sides of the sternum, extending to the clavicle, or over the middle of the chest and the lower half of the sternum. In most of these cases Dr. Buch succeeded in producing the same pain by exerting pressure on certain points of the abdominal part of the vertebral column. Spondylalgia is, indeed, like true neuralgia, apt to radiate from any point over which pressure is made towards some distant points, the pain being not only local but also remote. Dr. Buch believes that he has made out a correspondence between certain points: pressure, for instance, about an inch above the umbilicus generally causes pain in the region of the sacro-iliac synchondrosis, or a little above the sacrum; pressure about an inch below the umbilicus causes pain, radiating into the epigastrium, and especially into the pit of the stomach. In one patient, a woman of forty, pressure in the umbilical region caused a pain like compression in the middle of the vertex, exactly similar to clavus hystericus. Pressure on the spinous process was rarely painful. Other symptoms of spondylalgia are malaise, eructations (often sour), ravenous appetite, or a feeling like that of hunger. The bowels are normal or a little constipated; diarrhœa is rare. In some cases painful pulsation of the abdominal aorta was observed. All the symptoms of spondylalgia most frequently denote general neurasthenia. They also occur in chlorosis and diseases of the uterus. The affection is, pathologically, a neuralgia of the vertebral plexus of the abdominal sympathetic, to which the name "spondylalgia" has been given by Dr. Buch as being short and graphic. His treatment consists in a subcutaneous injection of a 50 per cent. solution of antipyrin into the abdominal region, or, in cases of neuralgia, at the seat of pain. The injection is rather painful, and the puncture if left to itself remains so for many days. If, however, massage is practised immediately after the injection, first lightly and then with some amount of energy, to disperse the liquid, the sensitiveness disappears in about ten minutes. Dr. Buch used the antipyrin injection, according to circumstances, daily or every two or three days. A complete cure occasionally took place after one or two injections, but sometimes only after ten or more. Improvement was generally observed after the first injection. The original affection must, of course, never be neglected, and in chlorosis the spondylalgia has been known to disappear under the administration of iron. He mentions as particularly interesting from the therapeutic point of view cases in which the spondylalgia disappeared under long-continued palpation, so that massage of the abdomen may in some cases be an excellent method of treatment. In conclusion, the author states it as his opinion that the affection is very common, and that every case of cardialgia and dyspepsia ought to be examined for traces of it.

THE MELBOURNE OPERATING THEATRE.

WE learn from the *Speculum*, a journal of the Melbourne medical students, that there are serious defects in the operating theatre of the Melbourne Hospital. It is referred to as "the operating theatre (so-called) of the Melbourne Hospital, which for antiquity and inconvenience stands almost unrivalled as a monumental mausoleum of modern apathy." It is said to be situated on the ground floor, an isolated building with one large room and two small antechambers—one used as an instrument room, the other as a consulting room, and occasionally for the administration of chloroform, the patients having to be deposited on the floor, whilst the doctor in a humble attitude gives the anæsthetic. The entrance doors face the north, and are convenient to receive any stray dust storms; and until lately anyone could see the patients carried across to the room. Patients during transit from any part of the hospital are exposed to the air and wet. "The ventilation of the large room consists mainly of fourteen sets of fixed louvres round the skylight, and conveniently placed to catch the dust, and also soot, from some eight or nine surrounding chimneys. Here it lodges during a calm, to be gently wafted down on the spotless covering of the operating table and patient when on it, much to the astonishment of visitors and annoyance of the operator, should the slightest wind outside dislodge it from its resting place. To complete the ventilation, ordinary ventilators, and four fanlights beneath, which are four grimy ledges sloping downwards into the room, likewise contribute their unwelcome offering when the fanlight is opened." "Night? Two gas circlets of six burners each, o'ershadowed by large reflectors, upon which the dust lies thick; and beneath these the operating table, 'fitted with all appliances, which will not work when required' (a remark by one of the leading surgeons during an operation), receives

the patient, who lies unconscious amidst hosts of antiseptic precautions, but happily unaware of the Nemesis above. This is called Listerism in the Melbourne Hospital. The illuminators above being fixed at a definite height, and the gas characteristic of a metropolitan monopoly, the unlucky operator by night has to resort to the dim flicker of a candle to complete a most difficult operation—an actual occurrence." After a description of the present theatre, one is suggested as it should be built, and it will be well if the governors of the hospital take this or some similar plan in hand, and remove what is a discredit to them, replacing it by one in which the skill of the operator is less likely to be baffled by "accidental" complications. We have no report of the result of operations at this hospital, but if the surgeons consider that the mortality is higher than it should be from preventable causes after operations, a united protest would probably effect the desired reform. We cannot think that a wealthy town like Melbourne will long rest under the imputation that it is careless about the welfare of the suffering poor.

THE TREATMENT OF HYDATID DISEASE OF THE LIVER.

DR. DAVIES THOMAS, whose contributions to the study of hydatid disease have been numerous and important, sums up the results of his researches (*Australian Medical Journal*, June 15th) as follows. That there is reason to believe that tapping operations fail to cure the patient in fully 40 per cent. (or more) of the cases in which they have been tried; and that, taking aspiratory puncture and ordinary tapping operations together, the deaths amounted to nearly 18 per cent., but the mortality following aspiratory puncture was only about half that of punctures with an ordinary fine trocar. Speaking generally, the greater the number of punctures required in a given case, the smaller is the probability of cure by tapping alone. Simple puncture, though generally devoid of risk, has been known to cause sudden death, sometimes from shock, sometimes, in the case of pulmonary hydatids, from suffocation by the fluid contents of the bladder-worm. As to parasiticide injections and the use of electrolysis, there is no evidence in their favour that does not apply to simple puncture, whilst each has drawbacks of its own. The mortality of the various forms of radical operation is given as follows: Caustics, 33·68 per cent.; canule-à-demeure, 26·66 per cent.; Simon's method, 48·0 per cent.; Volkmann's method, 19·05 per cent.; Lindeman n's method (abdominal section), 10·29 per cent., and ditto (thoracic incisions) 29·41 per cent. From which it appears that abdominal section yields an even lower mortality than puncture of the cyst.

COUNT PIETRO LORETA.

A FEW hours before he made away with himself, Prof. Loreta sent his annual donation of 500 lire (£20) to the "Society of the 8th August, 1848,"—a day on which a memorable stand was made for Italian freedom and unity, on which, too, Loreta, when a mere youth, had borne his part nobly. In the letter accompanying the donation he said: "Ti mando 500 lire da distribuire ai nostri compagni-poveri. Domani non potrò essere con voi. Ne saprete la causa. Addio!" (I send you 500 fr. for distribution among our poor companions in arms. To-morrow I will be unable to be with you. You will know the cause of this. Farewell!) Although president of the society, his annual gift was, characteristically, anonymous; and the secretary on receiving it, little knew that it was to be the last from the same source. He thought it was the first. A similar experience, say the Italian papers, is in store for the secretaries of countless other charities, of which Loreta was the anonymous benefactor. To the last he was an enthusiastic Liberal in politics, and, though a man of birth and fortune, he was from his youth upwards on the side of the Revolution. When still a student he fought in his country's cause as one of the "Battalion of Hope," and, after risking his life many times in the cholera visitation of 1865 (when, if ever man earned monumental honours, Loreta did), he joined in the year following Garibaldi's army in the Tyrol, and was frequently under fire, when relieving the wounded, in conflicts with the Austrians. His nature was in an exceptional degree ardent, aspiring, and impulsively philanthropic. He was genial, even jovial, to a fault. So highly emotional an organism was not without hereditary neuroses of a specially formidable kind; indeed, his father himself committed suicide, and his brother died an inmate of a lunatic asylum; a family history which points too plainly to the causes that led to his tragical end.

FEMALE MEDICAL AID IN INDIA.

IN the East, thanks to the engrained exclusiveness of social habit, the treatment of women's diseases is to the male physician or surgeon a practical impossibility. Access to such cases is open only to female practitioners. There is consequently a distinct necessity for the employment of medically trained women, and that in a kind of work for which their energies, if not in all points equal to those of men, are as a rule not insufficient. We would be slow indeed to admit the wisdom of employing women in medical duty under all and any conditions. On the other hand, it would be idle to dispute their manifest utility for the purpose in question. Attention has lately been directed to this subject by Sir William Hunter in an article in the *Contemporary Review* on the demand for female medical attendance in India. From the facts here stated it is evident that the aid rendered in sickness by lady practitioners has been much valued by the natives of our eastern dependency. The National Association for Supplying Female Medical Aid, founded in 1885 by Lady Dufferin, has been liberally supported by public subscriptions. The medical tuition which it affords to native women through the medium of the Indian medical schools has attracted a good number of students. Native princes, gentlemen, and the public generally have interested themselves in its growth. Dispensaries and small hospitals have arisen under its auspices and have, during the short period of their existence, done much to relieve the sufferings of the poorer population. The movement therefore is prospering in spite of considerable difficulties. Not the least of these is the want of a vernacular medical literature. This is in course of gradual formation.

A CASE OF SPINAL RESECTION.

IN the *New York Medical Journal* for June 29th Dr. Dawbarn records a case of traumatic paraplegia for which he performed resection of part of the spine. The patient was a man twenty-nine years of age, who fell from a height, striking his lower dorsal spines. On recovering consciousness he was found to be totally paraplegic below the umbilicus, and to have considerable displacement of his eleventh and twelfth dorsal spinous processes. These were replaced as far as possible, and a plaster-of-Paris jacket was accurately moulded on. Some months later he came under Dr. Dawbarn's treatment, the paraplegia not having at all improved. Electrical treatment was tried without permanent benefit, and then, as there was some deformity of the spines, it was decided to cut down on to the spinal cord, and, if possible, remove any portions of bone found to be pressing upon it. An H-incision was made over the seat of mischief, the longitudinal incisions being carried obliquely

down and inwards through the muscles on to the laminæ. These were then carefully sawn through, and the intervening mass divided into two by the transverse cut carried down between the two spinous processes. The cord was found to be compressed between the body and laminæ of the eleventh dorsal vertebra, and the laminæ and spines of the tenth, eleventh, and twelfth dorsal vertebræ were entirely removed. The patient made a good recovery from the operation. Ten weeks afterwards he is reported to have been "none the worse for his operation, but, on the contrary, is in many ways somewhat improved, so that he expresses himself as very glad that it was performed." The improvement consisted in restoration of muscular sense, recovery of sensation in the rectum and bladder, freedom from pain in movements of the head and trunk, and improved circulation and temperature in the lower limbs. Before the operation there had been an absence of sweating in the left leg and of all growth in the toenails of the left foot. After the operation the left leg sweated as much as the right, and the toenails grew vigorously. The operation might have been more successful if performed much earlier than after an interval of six months from the primary injury.

THE INTERMARRYING OF CONVICTS.

WITH an optimism certainly not justified by the medico-psychological literature of England, Germany, and Italy, or even of France herself, the French Government has set itself to encourage the intermarriage of life convicts in New Caledonia with life convicts imported from the prisons of the motherland. In official reports published in vindication of these matrimonial arrangements, it is said that "the Government of the Republic is animated in this policy by views of an exalted kind. The constitution of the family in our penitentiaries," the Government apologist continues, "is the best aid to morality. Some of these marriages between two persons whom society has rejected from its midst are prosperous, and such examples, although they are rare, are yet of a nature to warrant the Government in promoting them. The painful exceptions, the number of which has been exaggerated, will tend to become fewer, and the marriages in question will in the long run be better assorted." More than a quarter of a century ago the late eminent Commissioner in Lunacy for Scotland, Sir James Coxe, in an annual report of unusual interest, insisted on the necessity of breaking up and isolating the criminal class as the only way to check the multiplication of crime in our great cities. Forty years' experience in connexion with the Perth Penitentiary had brought Dr. Bruce Thomson to the same conclusion, the soundness of which has derived confirmation from the testimony of numerous Continental alienists, of whom the Italian Lombroso may be adduced as at once the most recent and the most authoritative. "*Simile simili gaudet*," he demonstrates, is nowhere more strikingly illustrated than in the transmission from parents to progeny of depraved habits and felonious proclivities; and his remedy is practically the one recommended by Sir James Coxe, that of separating the individual members of the criminal community as widely and effectively as possible, and of giving them a chance, under saner conditions of association and intercourse, of rehabilitating themselves physically and morally. Vice itself, and, still more, vicious tendency, can be lived down, but only by entire removal from the social atmosphere in which they have been generated, and by steady application of a morally reinvigorating regimen, tested by opportunity and modified by circumstances. With such facts and conclusions *en évidence*, the French Government has surely allowed a sentimental optimism to sway it unduly when it encourages such a system as that recorded by impartial eye-witnesses. "Girls, whether thieves or prostitutes," says M. Moncelon, "on arriving from the prisons of France and landing in New Caledonia are received in a religious asylum, superintended by the sisters of S. Joseph. The rule of this establishment resembles that of a *pension* where the girls draw lots for husbands. On the arrival of a convoy of such young women the bachelors imprisoned in the penitentiaries are in great excitement, and if they ascertain that there are any good-looking ones in the number they demand interviews or introductions. On a fixed day the convict-bachelor is brought into a parlour divided into two by an iron grating. There the sister introduces him to the girl whom he has fancied, and charges herself with the preliminaries, which, beginning with conversation, lead up to a matrimonial engagement." From this not very promising experience the marriage is contracted, with results, according to M. Louis Barron, another eye-witness, the reverse of encouraging. His gleanings, in fact, from the journals of New Caledonia form an instructive commentary on the *lex hæreditaria*, as evolved by Darwin, and are sufficiently adverse to the continuance of an experiment hardly creditable to the countrymen of Esquirol and Pinel, of Paul Broca and Legrand du Saulle.

THE FUNCTIONS OF THE CEREBELLUM.

Is the cerebellum an organ for the storage of cerebral events which have become automatic? Do we first of all receive with the cerebral cortex and then practise with the same brain-bark, and afterwards relegate to the cerebellum, as to a limbo, those things of which we are so tired of being conscious? Are all performances of the cerebral cortex conscious acts, and those of the cortex of the cerebellum unconscious? And so might questions, more or less unanswerable, be postulated without end. The functions of the little brain are scarcely known at all; even the dependence of the equilibrium on its existence may be called in question on the data supplied by pathology. It is perfectly certain that no obvious signs of nervous disease need exist when the lateral lobes are the seat of even extensive mischief. Some regard the cerebellum as the terminal organ of all visceral sensation, and on this assumption it has been thought that the curious perturbations in visceral epilepsy are to be ascribed to perversions of the vitality of the grey matter of the little brain. Anything is possible for the cerebellum. The most gifted imagination might guess strange things, yet pathology could perhaps find exact counterparts.

PUBLIC CONVENIENCES.

THE public conveniences at Piccadilly-circus, which were opened on Wednesday last, the 7th inst., were constructed by the Vestry of the Parish of St. James, Westminster, at a cost of about £3500. The circumstances under which these conveniences were constructed reflect considerable credit upon the Vestry in question, as it was only after a prolonged struggle with, and finally in spite of, the now defunct Metropolitan Board of Works that the Vestry were enabled to provide this much-needed accommodation. The conveniences, which are underground, are divided into two sections, each having a separate entrance from the street, the larger being designed for the use of gentlemen and the smaller for ladies. Both sections are approached from the street by a stone staircase, there being two flights of stairs for the men, one for entrance and one for exit, and a single staircase for the ladies. The accommodation provided in each section appears ample and complete, and the means of ensuring cleanliness in every respect satisfactory. Due attention has also been paid to suitable ornamentation. Ventilation is obtained through fresh-air inlet gratings at the street level and by the entrance staircases. The superstructure consists of a group of ornamental lamps.

designed in the free Renaissance style, and raised on a base and dome of polished Aberdeen granite, the lamp acting as a ventilating shaft, and the dome forming a reservoir for the heated or foul air, the upward current being formed in the shaft of the central lamp by means of a small sunlight, which is kept burning at its base. We again congratulate the Vestry of St. James upon the intelligence and enterprise displayed by it in this work, particularly in providing accommodation for ladies—accommodation the absence of which in this great city has long been felt as a crying evil. We may hope that the example thus set will be followed by other vestries.

"PHYSIOLOGICAL ALBUMINURIA."

DR. HANS MALFATTI, of the Laboratory for Applied Medical Chemistry at Innsbrück, controverts the belief that albumen or serum albumen is one of the normal constituents of urine in healthy subjects. He mentions the case of a healthy man in whom the ordinary tests apparently proved the presence of albumen, while Heller's test gave negative results. There was also a singular want of correspondence between the various reactions, as either the test by boiling seemed very satisfactory and acetic acid and ferrocyanide of potassium gave no reaction, or *vice versâ*. Filtration after the test by boiling did not always remove the apparent albumen, which was still discoverable in the filtered urine by ferrocyanide of potassium, especially when chloride or acetate of sodium had been added before boiling. The addition of ferrocyanide of potassium after boiling and adding acetic acid increased the turbidity considerably. When the urine mixed with acetic acid had been allowed to stand, and was then filtered, acetic acid and ferrocyanide of potassium did not make it so turbid, and had sometimes no effect at all, when the same filter was used repeatedly, especially with the addition of acid phosphate of soda, which sometimes prevented the occurrence of turbidity even after a single filtration. After the urine had been treated by reagents which throw down mucin, but not albumen, no albumen could be found, though many tests were tried. The author concludes from his experiments that in the case reported by him albumen was either entirely absent or present in an extremely small quantity only (1 in from 2 to 4 million parts). He considers that the body which has given rise to the supposition that albumen occurs in physiological urine is not an albumen, but a kind of mucin, which is easily broken up into typical mucin and a peptone-like body, and he believes that the presence of albumen in the urine of apparently healthy persons is really indicative of a morbid process, though not necessarily of one of at all a serious character.

HOLDING TO BAIL.

IT often is an exceedingly difficult question whether a person accused of a serious offence should or should not be allowed to give bail, but the ground upon which Mr. Marsham appears to have decided it recently at the Greenwich police court seems very strange indeed to the non-legal mind. The charge was one of murder and came up upon adjournment. Inspector Langrish thereupon asked for a further remand without going into evidence, which the magistrate granted. Thereupon Mr. Besley, who appeared for the accused, asked very naturally to be allowed to give bail. The magistrate objected that the charge was too serious, and that objection we can perfectly understand. Mr. Besley appears, however, to have been able to meet it by citing an instance in which an accused person, who was subsequently convicted of murder, was admitted to bail. Then the magistrate delivered what seems to us a very strange ruling. He is reported to have said that "he had not heard the evidence, and that being so he certainly should not take bail. He would not say that he would be of the same opinion if he had heard the evidence." The report is very meagre, and it may be that the magistrate only meant that he had not heard the evidence given at the original examination. If so, it seems to indicate that the arrangements at the Greenwich police court stand sadly in need of improvement. Surely when the personal liberty of a man who is still entitled at least to the presumption of innocence is in question there ought to be some means of making the depositions taken available for the use of the magistrate who has to adjudicate on that important question, or otherwise of referring the whole matter to the magistrate who is already in possession of the requisite information. If, on the other hand, the meaning is that because no evidence had been adduced that day against the prisoner, the worst ought to be presumed, then surely the rule is repugnant to all the traditions of British justice. In this case the person who is in the unhappy position of being accused is a medical man, and it is easy to see that, even if he should eventually vindicate his character, his present enforced seclusion must do him irreparable harm. Such harm may any day befall the most innocent of men, and, although it would be unreasonable to demand that the administration of the criminal law should be wholly unattended with inconvenience, and even serious inconvenience, to innocent people, it is surely not too much to ask that these inevitable inconveniences should be minimised by an even scrupulous regard for the rights of the individual, rather than aggravated by a perfunctory and reckless watchfulness over the public interest.

THE STRENGTH OF BRAIN FUNCTIONS.

THAT different functions of the brain have different strengths is not always recognised. A violent poison may paralyse the whole of the functions, and the rate at which they become extinguished is so great that it is impossible to say which goes first. In anæsthesia by means of ether the auditory perceptive centres seem to endure longer than the other perceptive centres; indeed, an expansive change appears to occur in them prior to their final closure. What we want to know is something more of the differing strengths of brain functions. This would be a great aid in the study of symptoms. At present the variations in the clinical course and progress of disease are as inexplicable as they are remarkable. That some further experimental researches on the relative strengths of the various nervous functions of the body would bring out facts of importance cannot be doubted.

PRELIMINARY MEDICAL EDUCATION IN THE UNITED STATES.

THE *Medical Record* notices with pleasure the fact that the New York State Legislature recently enacted a law requiring of medical students compliance with a certain standard of preliminary education. The requirements are not very stringent, as our contemporary says, but it is something to see so important a State Legislature legislate on the subject at all, and having put its hand to the plough it will not stop short, let us hope, of doing the work still more effectually. The law requires that "before the regents of the University of the State of New York, or the trustees of any medical school or college within the State, shall confer the degree of doctor of medicine on any person who has not received a baccalaureate degree in course from a duly authorised college or university, they shall require proof that he has passed an examination, under their authority, in arithmetic, grammar, geography, orthography, American history, English composition, and the elements of natural philosophy." It is obvious that unless such requirements

are made to apply also to graduates from outside the State, little good will be done. What is wanted is for all the States to agree upon some common legislation that will secure an indispensable amount of general culture and education in the medical profession.

THE TYPHOID GERM.

AT the recent meeting of the American Medical Association, a paper on the Etiology of Typhoid Fever was read by Dr. V. C. Vaughan (*Boston Med. and Surg. Journ.*, July 18th), who alluded to Eberth's discovery of a bacillus, which, although it had been found in most cases of the disease and had been isolated, had not been successfully inoculated in animals. To Koch's four rules for determining the causal relationship of a micro-organism to any disease in which it is found, Dr. Vaughan would add a fifth—viz., that it must be shown that the chemical products of the microbe are capable of producing the characteristic symptoms and lesions of that disease in an acute form. Eberth's bacillus did not respond to any test except that of its frequent concurrence with typhoid fever, and this it was claimed might be explained by its being a result, quite as well as its being the cause of typhoid. Dr. Vaughan had extracted a crystalline ptomaine from this bacillus, and found its injection into the abdominal cavity to produce fever and purging. Dr. Welch, however, thought that the evidence in support of Eberth's bacillus being the cause of typhoid was conclusive, and considered that further evidence was required to establish the belief that the ptomaines obtained from typhoid stools had anything to do with the production of the symptoms.

THE PATRICROFT GUARDIANS AND THEIR MEDICAL OFFICER.

A VERY small dispute between Mr. E. H. Roe, of Patricroft, medical officer of the Workhouse Hospital, on the one hand, and the guardians on the other, has led to his resignation at the request of the guardians, upheld by the Local Government Board after an inquiry by Mr. Henley, held, we are sorry to say, with closed doors. The *Eccles and Patricroft Journal* publishes a letter by Mr. Roe, giving his version of the quarrel, and a leading article on the subject. The dispute between Mr. Roe and the guardians arose in a very simple way. According to his contract with the guardians, he was to find "medicines internal," and they to find castor oil, cod-liver oil, and external applications and appliances. This was a very curious contract, and, as we think, a very unsatisfactory one, very different from the system in vogue in London, where medicines are supplied by the guardians. But small as the undertaking of the guardians was, they quarrelled over it with Mr. Roe. When he required substances for external application, however urgently, he had to wait till the next meeting of the board before they could be supplied. The guardians denied his right to order what external applications he thought fit, and only recognised his right to order such as his predecessor used to order. This is obviously a most absurd limitation. The crisis came in this manner. Mr. Roe told the chemist to have certain things he wanted ready when he should receive the order of the board. Instead of waiting for this the goods were at once despatched. But Mr. Roe did not use them. No less than five weeks elapsed before he could get from the clerk any information as to the board sanctioning the order of the drugs. Mr. Roe pressed the clerk, and pencilled a line to him saying that "a patient's death had been accelerated for the want of the medicines." This note was shown to the guardians, and was taken as a reflection on them, though it was meant only to stimulate the clerk, who said "he had forgotten" to bring the list of drugs wanted before the board. Mr. Henley defended Mr. Roe in regard to most of the points on which he was charged, but held that he had disobeyed a legal and reasonable direction of the guardians in "ordering" the drugs before the meeting of the board, though Mr. Roe had not ordered them, but only told the chemist to have them ready. We think that after such delays he should have ordered and used the drugs absolutely, and that the guardians should have indemnified him. If the saving of a patient's life or the mitigation of his sufferings in dying were involved, it was not a case for delay. We never heard of a medical officer being dismissed on so slight and doubtful a ground, and we earnestly hope that the guardians of their own motion will reconsider their attitude towards Mr. Roe. We have only one qualification to make. We are writing on Mr. Roe's version of the facts. But thi comes of the inquiry being with closed doors.

TREATMENT OF PNEUMONIA BY APPLICATION OF ICE.

DR. FIEANDT, writing in *Duodecim*, a Finnish medical journal, states that he has now treated no less than 106 cases of pneumonia with ice, and with the best results. Though ten of the cases were of double pneumonia only three out of the whole number succumbed, notwithstanding that the epidemic was by no means a slight one. The method adopted was to apply over the affected lung an india-rubber bag containing ice continuously for from twelve to twenty-four hours after the crisis. In addition to the local treatment the patients were given such medicines as are usually employed, that is to say, opium, ipecacuanha, digitalis, brandy, &c. The method has, we may remark, received of late some attention in this country.

PERSONALITIES IN JOURNALISM.

AN evening contemporary has lately had a very strong pronouncement on the "virtues of the greatest surgeon in the world in operations pertaining to certain diseases of women." He has a singularly sweet and pleasant expression, &c. Best of all, "he has now made a fortune," in spite of many cases where he is too generous to take a fee. It is difficult to say whether his fame is greatest in England, Germany, or the United States. The point of all this laudation — which is extended also to a favourite pupil, described as having a fine face and quiet, gentle manner, &c.—seems to be reached in an expression of the hope that the "greatest surgeon," in consideration of his fortune, will be able at the next election to offer himself to a constituency in which the political views held by our contemporary prevail.

ŒDEMA OF THE BRAIN.

ACCORDING to Dr. Hugenin of Zurich inflammatory œdema of the brain or diffused encephalitis occurs after perforating wounds of the skull with injury to the brain, also in tumours of the brain where the centre breaks down and softening is going on towards the periphery, also in abscess and infectious diseases of the brain, and more rarely in cases where there is hæmorrhage or a hæmorrhagic infarct. It is, however, to the non-inflammatory variety of cerebral œdema that Dr. Hugenin has devoted his attention specially. Having made a large number of post-mortem examinations in cases of this kind, he has come to the conclusion that so long as the vessels within the cranial cavity maintain their normal condition, there is no fear of any fatal œdema resulting from circulatory disturbance in cerebral disease; but when there exist such morbid conditions as obliteration of the lymphatics or increased intra-cranial pressure, due to diminution of the cranium or more par-

ticularly to an arrest of its ordinary growth, fatal œdema of the brain may be induced. He found that in children who had died from hyperæmia or œdema of the brain or slight hydrocephalus there was commencing meningitis, usually of an infectious character—that is to say, due to the presence of streptococci. Fatal congestive œdema in children was found to occur only when there was obliteration of the channels leading from the space beneath the pia mater or obliteration of the Pacchionian bodies, such as is set up in the course of chronic meningitis.

LARYNGEAL ULCERS IN TYPHOID FEVER.

DR. ANTONOFF publishes in the *Ejenedélnaya Klinicheskaya Gazeta* the result of a series of histological examinations of laryngeal ulcer occurring in typhoid fever. The earliest change, he says, is a hyaline degeneration of the membrana propria of the capillaries and smaller arteries, and in places of the connective tissue of the mucous membrane. The epithelium dies from coagulative necrosis. The reticulum formed becomes the seat of micrococci. There is no inflammatory infiltration in the broken-down tissue, but the process takes place on the border between healthy and morbid tissue. If the ulceration goes deeper perichondritis with formation of pus, phlegmonous inflammation of the soft parts, and loosening of the fibres of the cartilage take place.

THE LIVERPOOL POISONING CASE.

AFTER a protracted trial, and evidence of a full and minute character, Florence Maybrick was found guilty at the Liverpool Assizes last Wednesday of the wilful murder of her husband, by administering arsenic, and sentence of death was passed in the usual form. Owing to the unusual circumstances surrounding it the case has excited widespread interest, an interest perhaps not equalled since the hearing of the curiously similar Madeleine Smith case, which was tried in Edinburgh in July, 1857, but which ended in a happier manner for the accused than did that of the unfortunate woman condemned to death on Wednesday. The case turned largely upon the medical evidence, and it is that with which we are mainly concerned. This evidence, as our readers will be aware, was conflicting and contradictory, and in view of the extreme gravity of the case, we shall have to reserve our analysis of the medical evidence until our next issue.

PATHOLOGY OF EXTENSIVE BURNS.

OSCAR SILBERMANN of Breslau finds that in extensive burns the red corpuscles alter their form, and are able to exert less than their normal resistance to heat, drying, compression, and staining. In consequence of these changes thrombosis and stasis in different organs are very frequent, especially in the lungs, kidneys, stomach, bowels, spleen, liver, skin, and brain, and most of all in the smaller branches of the pulmonary artery. The stasis in the lungs produces a very considerable impediment to the emptying of the right ventricle, with enormous venous congestion and dangerous arterial anæmia. This again leads to apoplexies and parenchymatous alterations in the above-mentioned organs, also to dyspnœa, cyanosis, coma, a small pulse, angina pectoris, eclampsia, anuria, and to a diminution of the surface temperature.

FOREIGN UNIVERSITY INTELLIGENCE.

Berlin.—Dr. Rosenheim has been recognised as *privat-docent* in Medicine.

Buda-Pesth.—The nominations of the Professorial Senate to several of the professorships vacant have not been accepted by the Minister of Education. It is, however, stated that the chair of Special Pathology and Therapeutics has been definitely filled by the appointment of Dr. Karl Kétli.

Naples.—Dr. Romano has been recognised as *privat-docent* in Operative Medicine.

Padua.—Dr. Canalis has been recognised as *privat-docent* in Hygiene.

Pavia.—Dr. Zambianchi has been recognised as *privat-docent* in Operative Medicine.

Rio de Janeiro.—Dr. João Paulo de Carvalho has been appointed Professor of Physiology.

Turin.—Dr. Gradenigo has been recognised as *privat-docent* in Midwifery.

Zurich.—Dr. Felix of Würzburg has been appointed Prosector of the Anatomical Institute.

THE report on the composition and quality of the metropolitan water-supply during the month of June by Messrs. Crookes, Odling, and Meymott Tidy shows that of the 168 samples examined 6 were recorded as "very slightly turbid." The remaining 162 samples were found to be clear, bright, and well filtered. During the month of June the progressive increase in degree of freedom from organic matter, manifested by the water-supply during the first five months of the year successively, was not found to be sustained; but there was, on the contrary, a retrogression to about the degree recorded as prevailing a month or two back. Dr. Frankland, in his analysis, states that, taking the average amount of organic impurity contained in a given volume of the Kent Company's water during the nine years ending December, 1876, as unity, the proportional amount contained in an equal volume of water supplied by each of the Metropolitan Water Companies and by the Tottenham Local Board of Health was:—Kent, 0·8; Tottenham, 1·0; Colne Valley, 1·2; Grand Junction, 1·5; New River, 1·6; Lambeth, 2·0; West Middlesex, 2·6; East London, 2·7; Southwark, 3·4; and Chelsea, 3·8.

AT the Edinburgh University, on capping day, as will be seen by the list, published in another column, of successful candidates for degrees and of prizes and scholarships awarded to distinguished graduates, the Cameron Prize in Therapeutics was conferred on M. Pasteur in recognition of the high importance and great value to practical therapeutics of the treatment of hydrophobia discovered by him.

ACCORDING to telegraphic advices from Zanzibar, fever is very prevalent among the fleet, the English apparently suffering most. On the *Agamemnon* alone, out of a total complement of 400 men there are eighty sick, including seven officers. The deck had been turned into a hospital, and hammocks were slung everywhere.

IN reply to a deputation to urge the Australian Government to assist in an attempt to remedy the defective hospital accommodation in Melbourne, Mr. Gillies has agreed to ask Parliament to give a grant of £10,000 towards the foundation of a hospital, and to consider the question of a contribution towards its maintenance.

THE Italian Medico-Psychological Congress (Congresso Freniatrico) will this year be held at Novara, within easy distance of Turin and Milan, from Sept. 8th to the 14th. These Congresses are triennial, and there have already been five of them.

AT Rome the great Hospital of the Santo Spirito is about to open a *succursale* (branch) near the Bocca della Verità for the accommodation and treatment of chronic cases.

THE HEALTH OF THE ARMY IN 1887.

No. III.

THE average strength of the European troops in India (exclusive of the force in Upper Burma) was 63,942; the admissions were 1351, the deaths 14·68, the mean sick 70·45, and the invalids sent home 22·60 per 1000—all except the invaliding lower than in 1886, and except the mean sick considerably under the decennial average.

In Bengal, a force of 40,921 had 1404 admissions, 15·00 deaths, 69·65 mean sick, and 10·90 invalids discharged per 1000, all, except the invaliding, lower than in the preceding year. Malarial fevers were the most frequent cause of admissions (amounting to upwards of one-fourth of the whole), and enteric fevers of death, cholera being the next. The admissions at the various stations ranged from 723 at Solon to 2623 per 1000 at Saugor, where the great excess was due to malarial fevers. The deaths, omitting stations where the force was under 150, and the hill depôt at Naini Tal, where the results were affected by the number of men arriving from Burma, ranged between 4·02 per 1000 at Solon and 34·14 at Nowgong, the latter due chiefly to cholera. Enteric fever gave rise to 13·1 admissions and 4·06 deaths per 1000 of strength. Lucknow was the station which furnished the greatest number of cases and deaths, amounting to 79 and 16, but there were few stations entirely free from it. As usual, the great prevalence of the disease was among the younger soldiers. The admissions were highest in the second and the deaths in the third quarter of the year. The deaths were in the proportion of 1 in 3·24 cases. Cholera prevailed to a considerable extent, the admissions amounting to 3·3 and the deaths to 2·25 per 1000, chiefly in the third quarter of the year. The stations most affected were Peshawar, Meerut, Rhaniket, Lucknow, and Allahabad, and also troops on the march. Two of every three cases terminated fatally. Venereal diseases, including all forms, caused 324 admissions, and the constantly non-effective from these amounted to 22·32 per 1000. Three cases of hydrophobia occurred, all of which died, one at Saugor, one at Naini Tal, and the third at Dalhousie. The most frequent cause of invaliding to England was the group of diseases of the circulatory system, amounting to 2·98 per 1000 of strength. Of 122 cases, 37 were returned as palpitation. In the Bengal command, the cavalry had the highest ratio of admissions and mean sick and the artillery of deaths. The sickness was greatest among the men at the ages of twenty to twenty-four, and also the death-rate, with the exception of those from thirty-five to forty. Among the officers the cases of sickness amounted to 684, the deaths to 10·24, and the invaliding to 29·86 per 1000, considerably lower than among the men, except the invaliding, which was one-half higher. Among the women the admissions were 783, and the deaths 16·96 per 1000, and among the children 562 and 52·62 per 1000.

In the Madras Command the admissions from an average force of 11,738 were 1242, the deaths 13·80, the mean sick 77·26, and the discharges by invaliding 13·37 per 1000, being considerably lower than in 1886. Venereal diseases were the most prevalent, and those of the digestive system the most fatal in the Command, the latter causing nearly one-fourth of the deaths. Omitting the depôts, the highest ratio of admissions was at Thayetmyo, and, at stations having a force over 150, of deaths at Madras and Pallaveram, but it is stated that both these results were considerably affected by the arrival of sick from the troops on field service in Burma. The admissions by enteric fever were 12·3 and the deaths 2·98 per 1000, the disease being most prevalent and fatal in the third quarter of the year. Secunderabad furnished much the largest number of cases and deaths, and next to it Bangalore. The prevalence of the disease at Secunderabad was attributed to the 7th Hussars having recently arrived from England, and having a large proportion of young men in it; "the barrack and latrine accommodation was also reported to be defective." At Bangalore the cause could not be definitely traced, but was believed to be attributable to the bad sanitary conditions of the bazaars, where the men "drink bad water, mixed or otherwise. There were only 8 cases of cholera and 7 deaths; 4 of them occurred at Secunderabad. The admissions by all forms of venereal disease were 350 and the constantly non-effective 27·39 per 1000. The high death-rate by diseases of the digestive system was due to hepatitis and abscess of liver, the admissions by which were 27·26 and the deaths 3·15 per 1000. By arms of the service the infantry had the highest ratio of admissions and mean sick and the lowest of deaths, while the deaths were highest and admissions lowest in the cavalry. In the invaliding to England, 2·90 per 1000 were sent home on account of the circulatory system—a ratio almost identical with that from Bengal. Among the officers the cases were 834, the deaths 10·16, and the invalided 98·30 per 1000; the last, though very high, was slightly lower than in 1886. Of 29 thus sent home, 12 were on account of fevers, 7 debility, and 5 hepatic affections. The women had 1002 cases and 17·52 deaths per 1000; and the children 856 and 54·09 per 1000.

The water-supply of Fort St. George is reported as unsatisfactory, and the latrines and drains require improvement. The water at Bangalore is also unsatisfactory, requiring to be boiled and filtered a second time before use by the troops. At most of the other stations it is reported as abundant and good.

The average strength of British troops in Bombay was 11,283; the admissions were 1274, the deaths 14·45, the mean sick 66·30, and the discharges by invaliding 12·32 per 1000 of strength. The admissions and mean sick were considerably under, but the deaths and invaliding slightly above the proportion in 1886. The admissions ranged between 2058 per 1000 at Ahmedabad and 775 at Deolali; and the deaths between 59·52 at Neemuch and 4·27 per 1000 at Hyderabad. The excessive mortality at Neemuch was due to an outbreak of cholera. The admissions by enteric fever were 11·3 and the deaths 3·37 per 1000 of strength. Mhow furnished much the largest numbers of cases and deaths, the former having been 56 and the latter 13 out of a total of 127 and 38, but no specific cause for this could be ascertained. The disease also prevailed to a considerable extent at Nasirabad, Karachi, and Ahmednagar. Cholera was the cause of an admission-rate of 3·5 and a death-rate of 2·48 per 1000. Of 39 cases and 28 deaths, 23 and 17 occurred at Neemuch in the third quarter of the year, and 8 cases with 5 deaths at Mhow. No cause is assigned for the outbreak, nor is any information given respecting the measures adopted to check it, or the removal of the troops into camp, if that were done. The admissions for venereal diseases, including all forms, were 287 per 1000, and the constantly non-effective from it 20·59, both lower than in the other two Presidencies. The highest ratio of admissions and mean sick was in the cavalry, and of deaths in the artillery; the infantry had the lowest of admissions and deaths. Among the officers the cases amounted to 612, the deaths to 8·42, and the invaliding to 61·80 per 1000. The women furnished 717 cases and 16·01 deaths, and the children 576 and 53·40 per 1000.

The number of recruits medically examined during the year was 60,976, or about 14,000 less than in 1886. The number rejected was 27,571, or 452 per 1000 examined, being 19 per 1000 higher than in 1886. There were 51,884 primarily inspected by army medical officers, with a ratio of 458 per 1000 rejected, and 9092 by civilian medical practitioners, with only 210 per 1000 rejected; but of those passed by the latter, 1919, or 267 per 1000, were subsequently rejected, giving a ratio of 421 rejected of the number primarily inspected. In addition to the total rejected at inspection there were 249, or 4·08 per 1000, discharged as unfit within three months after enlistment. But as we have frequently pointed out, some of the causes of rejection were not medical but military, such as under-height and over-height, under chest measurement, and apparent age not in accordance with General Orders. If these be deducted from the numbers inspected and rejected the proportion found unfit on medical grounds would be 318, as against 312, per 1000 in the preceding year. Of the recruits finally passed into the service, 763 per 1000 were natives of England and Wales, 96 of Scotland, 129 of Ireland, and 12 of British colonies and foreign countries. From the tables in the report, "it has been calculated that, excluding boys under seventeen years of age, the average age of recruits finally approved during the year was 19·6 years, the average height 5 ft. 5·8 in., the average weight 126·2 lb., and the average chest measurements 33·8 in. These all show an improvement upon the results for 1886. As regards education, the returns show an increase in the "well educated," but attended with a reduction in those able to read only, while the "unable to read" remains exactly the same as in the preceding year.

In the appendix to the report we observe with much satisfaction that Surgeon-Major Notter, the Professor of Military Hygiene at Netley, has resumed the annual review of the progress of hygiene introduced originally by Professor Parkes, but which has been in abeyance since 1882. To these reviews we always attached much importance, and Dr. Notter has done well to inaugurate his professorial career by re-establishing them. In addition to notices of works bearing on hygiene, he has given a full detail of the work done under his superintendence at the laboratory at Netley. Among other things this included an analysis of 89 samples of water, of which 36 were found "fit for use," 26 usable or requiring filtration before use, and 27 unfit for use on account of organic impurity, and of excessive hardness and chlorides. The details of these are given in a tabular form. There is also a report of bacterial cultivations from these samples of drinking water by the assistant professor, Surgeon A. M. Davies. The conclusion at which he arrived was that "no opinion apparently can be expressed as to the character of a drinking water from the rough bacterial testing as here recorded." But the number of observations is small, and Mr. Davies is continuing them in the hope of obtaining some definite result. In addition to these, a course of experiments was made on the filtration of water, and a considerable number of analyses of different samples of concentrated and preserved foods, milk, and wine, the results of which are given in some detail. The amount of work done and the careful manner in which the results are reported are very creditable to this branch of the Netley School, and if properly utilised by those in authority, ought to prove very beneficial.

The usual list of operations performed at the hospital during the year, with short abstracts of the most important cases, has been furnished by the assistant professor, Brigade surgeon Goodwin. The same officer gives a very good report of the transactions of the French Congress of Surgery at Paris in March, 1888, which he attended officially as the representative of the British Army Surgeons. The appendix also contains an abstract of a topographical report on the Pichin valley by Surgeon-Major Burry, M.D., and several cases by Army medical officers. But for these we must refer our readers to the volume itself, the whole appendix to which is deserving of study.

THE PROPHYLAXIS OF TUBERCULOSIS.

WE have been requested by the Standing Committee to publish the following "Instructions to the Public, to enable it to know and be capable of protecting itself against Tuberculosis."[1] The document was communicated to the Academy of Medicine on July 30th. When it came on for discussion at the meeting of the Academy on Aug. 6th, the document was submitted to severe criticism, especially by Drs. G. Sée and Dujardin Beaumetz, the latter declaring there was no evidence that tuberculosis was propagated through meat. Other speakers also criticised the recommendations in Clause 6, and eventually the debate was adjourned to the 13th inst.

I. Tuberculosis claims more victims in towns and even in certain rural districts than any other disease. Thus, in 1884, for example, of 56,970 deaths in Paris about 15,000, or more than one-fourth, were due to tuberculosis. The tuberculous are so numerous because pulmonary phthisis is not the sole manifestation of tuberculosis, as has been erroneously believed by the public. Physicians have good ground for considering as tuberculous many other diseases besides pulmonary phthisis. In fact, a number of cases of bronchitis, catarrhs, pleurisies, croup (gourmes), scrofula, meningitis, peritonitis, enteritis, white swellings (osseous and articular), and cold abscesses are tuberculous diseases as formidable as pulmonary phthisis.

II. Tuberculosis is a parasitic disease, virulent, contagious, transmissible, caused by a microbe—the bacillus of Koch. This microbe penetrates into the organism by the digestive canal with food, by the air-passages with inspired air, by the skin and mucous membranes following sores, punctures, wounds, and various kinds of ulceration. Certain diseases—measles, small-pox, chronic bronchitis, pneumonia; certain constitutional states due to diabetes, alcoholism, syphilis, &c.,—greatly predispose the individual to contract tuberculosis. The cause of tuberculosis being known, the precautions taken against its germs are capable of preventing its propagation. We have an encouraging example in the results obtained in respect to typhoid fever, the epidemics of which diminish in all towns where steps have been taken to prevent the typhoid germ mingling with drinking water.

III. The parasite of tuberculosis may be met with in the milk, muscles, and blood of animals serving for the food of man (ox, cow especially, rabbit, poultry). Raw or underdone meat and blood, being capable of containing the living germ of tuberculosis, should be prohibited. Milk, for the same reason, should only be consumed after being boiled.

IV. Owing to the dangers arising from milk, the protection of young children, who are so readily attacked by tuberculosis in all its forms (since there die annually in Paris more than 2000 tuberculous children below the age of two years), should especially engage the attention of mothers and nurses. The ideal is of course lactation by the healthy woman. A tuberculous mother should not nourish her child. She should entrust it to the care of a healthy nurse living in the country, where, under the best hygienic conditions, the risks of tuberculous contagion are much less than in the towns. The child thus brought up will have a great chance of escaping tuberculosis. If suckling at the breast be impossible, and it has to be replaced by feeding on cow's milk, this milk, given to the infant by the bottle or spoon, should always be boiled. The unboiled milk of asses and goats is far less dangerous.

V. Owing to the dangers arising from butcher's meat, which may preserve all the characters of health even when the animals are tuberculous, the public is largely interested in being assured that the inspection of meat, required by law, is properly and generally practised. The only absolutely certain means of avoiding the dangers of meat coming from tuberculous animals is to cook it to such an extent that the deep parts are as well done as the surface; only thoroughly roasted, boiled, or fried meat is devoid of danger.

VI. On the other hand, the germ of tuberculosis, being capable of transmission from the tuberculous to the healthy subject by sputa, pus, dried mucous discharges, and all objects laden with tuberculous dust, it ought, to ensure security from the transmission of tuberculosis, to: 1. Be known that the sputa of the phthisical being the most formidable agents for the transmission of tuberculosis, there is a public danger in distributing them on the soil, carpet, hangings, curtains, napkins, handkerchiefs, cloths, and coverings. 2. Be well understood, in consequence, that the use of spittoons should be imposed everywhere and upon everybody. These should always be emptied into the fire and cleansed with boiling water; they ought never to be emptied on dust-heaps, or in gardens, where they may tuberculise the poultry, nor into the latrines. 3. Not to sleep in the bed of a tuberculous subject; to dwell in his room as little as possible, and especially not to suffer young children to sleep there. 4. To remove from places, inhabited by the phthisical, individuals regarded as predisposed to contract tuberculosis, subjects born of tuberculous parents, or having had measles, small-pox, pneumonia, repeated attacks of bronchitis, or suffering from diabetes, &c. 5. Not to use objects which may have been contaminated by the phthisical (linen, bedding, clothing, objects of toilet, hangings, furniture, toys) except after previous disinfection (high pressure steam, boiling, sulphur vapour, lime-washing). 6. To ensure that the rooms of hotels, lodging-houses, châlets, or villas occupied by the phthisical in watering-places or winter resorts are furnished and carpeted in such a way that disinfection may be readily and completely effected after the departure of each patient; the best plan would be that these rooms should have neither curtains, carpets, nor hangings; that they should be painted with lime, and the floor be covered with linoleum.

The public is mainly interested in preferring hotels in which such indispensable hygienic precautions and measures of disinfection are carried out.

[1] These instructions have been drawn up by the Standing Committee of the Congress for the study of Tuberculosis, consisting of MM. Chauveau (President), Butel, Cornil, Grancher, Landouzy, Lannelongue, Legroux, Leblanc, Nocard, Rossignol, Verneuil, Villemin, L. H. Petit (Sec. Gen.). They have been seen and approved by MM. Bouchard, Brouardel, Potain, and Proust.

THE PARIS UNIVERSAL EXHIBITION.

(FROM OUR SPECIAL CORRESPONDENT.)

The International Congress of Hygiene.

THERE are so many congresses now sitting in Paris that it is physically impossible to follow them all. Last week we had the congresses on Alcohol, on Poor Relief, and on Therapeutics. This week we have the congresses on Mental Medicine, on the Amelioration of the Condition of the Blind, on Zoology, and on Hygiene and Demography. The last-named is undoubtedly the most important of all these gatherings. Its labours were inaugurated on Aug. 4th, and there were at that time 662 members, of whom 134 were foreigners, and represented 28 different nationalities. Among the latter there were 10 English, 10 Italians, 14 Russians, 6 Roumanians, 8 Spaniards, 4 Swiss, and 22 delegates from the North and South American continents. Further, it is to be noted as a gratifying symptom that the various municipalities, almost all the municipalities of the large towns of France, have sent special delegates. The opening ceremony took place in the large Amphitheatre of the Ecole de Médecine, which was gracefully decorated with drapery and flowers for the occasion. The Congress is held under the honorary presidency of the Minister of the Interior, and Dr. Brouardel occupied the chair. Dr. Chantemps, president of the Paris Municipal Council, and Sir Douglas Galton sat on either side of the chairman. The platform was crowded with the representatives of different nationalities, and the large amphitheatre was completely filled by the members of the Congress. A considerable number of ladies, many of them members of the Congress, also assisted. Dr. Brouardel, who was warmly greeted when he rose to speak, related how within thirteen years French hygienists had been received abroad five times, at Brussels, Turin, Geneva, the Hague, and Vienna. All had retained an ineffaceable souvenir of these great meetings, and he hoped that at our present Congress and on the pacific field of hygienic study fresh victories would be achieved. Alluding to the Faculty of Medicine, where the Congress met, he spoke on the immense changes that had been brought about. Here it was that medical men had struggled against barber-surgeons, and had sought to maintain the exclusiveness of their profession. Yet here it was to-day that medical men welcomed engineers, chemists, architects, public administrators, and not only welcomed them, but were even anxious to consult them and to follow their advice. Not only was this a mighty change, but it was precisely this that constituted their principal force. It was because hygiene united so many different professions that it had acquired so much strength and popularity. Hygiene had swept away the old ramparts that had kept various professions apart, and it would also help to unite different nationalities. The discussions, which were formerly restricted to the academies, had now invaded the Parliaments, and "the President of the French Republic, justly inspired by the interests of the Democracy, of which he was the highest and the most respected representative, had inscribed reform in the sanitary services among these reforms which must receive the first attention of the Legislature." This announcement was received with loud applause. Dr. Brouardel then proceeded to describe the difficulties of the Legislature when sanitary measures were proposed, as they almost invariably interfered with some vested interests. These interests soon organised resistance against the proposed reform. The expense and difficulty of reform was a certainty, while the danger to be avoided was often unrecognised or doubtful in the mind of the public. Then there was always some doctor or other who supported the old ideas, and thus strengthened the reaction. The Governments were often sorely perplexed. But such congresses as the present armed the sanitary reformers with an expression of competent opinion which no administration could afford to discard. Dr. Brouardel then described some of the progress already achieved, and concluded by rendering homage to Dr. Napias and Dr. Martin, who had so ably organised the Congress, and the younger secretaries who had assisted. Paraphrasing the "Marseillaise," he said, "Vous entrez dans la carrière lorsque vos ainées y sont encore." Our generation has forged the arms; it is for the next generation to use them.

Sir Douglas Galton was then called upon to speak, and, in the name of Professor Corfield, Mr. Shirley Murphy, and the other English delegates, thanked the Congress for the reception given them, and for the honourable position he (Sir Douglas Galton) occupied at the presidential table. He regretted deeply the absence of his eminent colleague, Sir Edwin Chadwick. Dr. Alfred Carpenter had once remarked that the influence of a sanitary inspector in preserving the health of a community depended on the degree of education of that community concerning the laws of hygiene. The mission of the English sanitary societies represented at this Congress was to spread the knowledge of hygiene at home and abroad. In Paris especially they were called upon to admire the progress made, and envy the intelligent manner in which the principles of hygiene were applied to daily life. The next Congress, it had been decided, would be held in London. They would do their best to show their foreign visitors how in England sanitary principles were practically applied. He hoped the French hygienists would attend in large numbers, and promised them a hearty welcome in London.

Senator Dr. Pacchiotti, on behalf of Italy, delivered an eloquent oration. He dwelt on the delight of the foreign delegates when invited to visit the country which had done so much for humanity, and which to-day had organised a universal exhibition that was the marvel of the world. He described how Italy, enlightened by the example of France, had created at the Ministry of the Interior a service of hygiene. This consisted of a director of hygiene, a medical man, and a committee of hygiene, organised under the Minister of the Interior at Rome. These watch over the public health of the entire kingdom, while at each provincial prefecture there was a similar director of hygiene aided by a committee to watch over local interests, and to communicate with the central bureau at Rome. Dr. Pacchiotti then, in warm, glowing language, showed how Italy and France, as two sisters, had progressed hand in hand, how the works of M. Pasteur, of Emile Trélat, and of Durand Claye had been appreciated in Italy, and how many Italian municipalities had imitated the example of Paris in creating a municipal laboratory for the prevention of the adulteration of food. In the future, as in the past, France and Italy would continue to struggle for freedom, for civilisation, home, country, and humanity. This speech, which was ornamented by many flowers of rhetoric, was very enthusiastically applauded.

Senator Dr. Crocq, official delegate of the Belgian Government, related what had been done in Belgium to organise the sanitary services, and maintained that it was the duty of every Government, whatever its origin and form, to forward the interests of the people, and the first of these interests was the preservation of their health. For this purpose private interest, if necessary, must be sacrificed. A healthy people cost less and produced more. The question was an international one, for with the modern and rapid means of communication and exchange one nation was sure to suffer from the neglect of sanitary matters by a neighbouring nation. He therefore congratulated the Congress on its international character and on having met in France, the land of freedom, and in Paris, the capital of progress.

Dr. W. Dextererv, delegate of the Russian Society of Public Hygiene, briefly but warmly expressed the sympathy of Russian sanitary reformers with the French nation and the efforts of French hygienists. He was greeted with applause of a very special and marked character.

Dr. Felix of Bucharest rendered homage to the great sanitary reformers whom he had met in Paris at the Congress of 1878, and who were now dead; mentioning the names of Bouchardat, Gübler, Fauvel, Durand Claye, Lionville, Paul Bert, Würtz, and Tardieu, He closed by a graceful compliment to the President of the Republic, M. Carnot, and the President of the Congress, Dr. Brouardel.

Señor M. Belmas, on behalf of the Spanish Delegation, described the progress achieved in Spain and the decrease of the death-rate in that country. He showed that a system of sanitary administration was being organised on the French model, and that those countries, late in reform, might ultimately become the healthiest, through the adoption of the most recent and perfected methods.

Dr. Chantemps insisted that a reduction in mortality always followed on the rigorous application of sanitary measures. As administrators, they had come to the Congress to learn. In the study of hygiene, a sentiment of generous

solidarity united the representatives of every nation, and nowhere were words of international fraternity more welcome than at an international sanitary congress.

Dr. Napias, as secretary of the Congress, read a lengthy report on its organisation, containing the facts and statistics as to the Congress already given. He concluded by expressing his thanks for the active support the cause and the Congress had received at the hands of the press, and especially the representatives of foreign scientific journals.

Dr. Chantemps having felicitated the Congress on the presence of so many ladies, Dr. Roth urged that the Ladies' Sanitary Association was the first society of the sort that had been formed, and then the Congress adjourned to other apartments, where refreshments were served, and many friendly acquaintances renewed.

On Monday morning the various sections of the Congress met, and several resolutions were adopted. In the first section there was an important discussion on measures that should be taken in schools to prevent the spread of phthisis by the sputa of youths suffering from tuberculosis. Dr. Jablonski, a Russian delegate, would exclude every pupil who might be suspected of tuberculosis, but this proposal found no support whatsoever from the members of the Congress. Dr. Felix of Bucharest energetically urged that when there was abundant expectoration and no doubts entertained as to the nature of the malady, then the young person—for this would rarely apply to little children—should be excluded from school. There could be no doubt that the sputa were a cause of infection; and therefore the education of one child had better be sacrificed instead of endangering the health of a whole school. Dr. C. Drysdale urged that the question was too wide in its bearings to justify the Congress in jumping at a conclusion. Personally, he had twenty years' experience of hospital treatment of phthisis, and had failed to remark that the nurses and other attendants contracted tuberculosis; and they were far more exposed to the contagion than school children, even if one or two among the latter were in an advanced stage of consumption. Other speakers protested against the danger of spreading unnecessary alarm, urging that cases where "suspicion" only existed should be subject to confidential communications between the school and the family doctor. Suggestions were also thrown out as to the necessity of providing spittoons, and preventing children soiling the floors of schools; but these were very generally considered impracticable. Finally, the section adopted the following resolution: "That children who undoubtedly are suffering from pulmonary tuberculosis may render the adoption of measures prescribed by the authorised medical attendant necessary for the preservation of the health of the school." Practically the question is left to the discretion of the school doctor, who may take measures, such as the exclusion of the pupil, when he thinks there is a real risk of contagion.

In the afternoon an important discussion took place in Section 5 on the report presented by Dr. Proust, inspector-general of the sanitary services, on Sanitary Works in Seaport Towns. The report concluded: "(1) That it was the strict duty of Governments and municipalities to render ports healthy; (2) that sanitary works for seaport towns were more necessary than for other towns; (3) that it was only when such sanitary works had been accomplished that any notable reduction in the death-rate and zymotic death-rate would take place; (4) that it was only when the ports presented a soil unsuitable for the penetration of morbid exotic germs that the last quarantine checks could be abolished." The discussion was limited to the first two clauses. No speaker made any allusion whatsoever to the question of quarantine. A very mild discussion was held as to whether the State, the municipality, or the chambers of commerce could best secure the application of the necessary sanitary measures, and then the vote was taken, and a favourable decision unanimously given. The chairman now rose to vacate the chair, but Mr. Adolphe Smith protested that, in common with many others, he had only voted in favour of the first two or three clauses of the resolution, and did not understand that the question of quarantines had yet come before the section. Most of the delegates had, however, already risen to leave. A confused conversation followed, and it was understood that the question would be re-opened on another occasion. The last clause of the resolution practically means that quarantines should be imposed everywhere, for what port is there in the world where it is possible to declare that the soil is absolutely incapable of harbouring the germ of an imported disease? This is evidently a subject which the Congress must more carefully discuss.

In the afternoon Section 1 debated the able and interesting report of Dr. Landouzy and Dr. H. Napias on the Best Means of Protecting the Health of Children. Dr. Desmoulin of Ghent said that whereas the mortality among rich children ranged from 10 to 20 per cent. that of the poor varied from 30 to 60 per cent. At Ghent the children working in factories, from the age of eleven, showed terrible signs of physical degeneration. He urged that mothers should receive such help as would enable them to leave the mill at the period of childbirth. Many of the speakers denounced poverty as the principal cause of a high rate of mortality, but several delegates were afraid that by restricting the work of children this poverty would be increased. Mr. Adolphe Smith, on the contrary, pointed out that it was precisely the competition of the work of women and children that reduced the scale of wages. The British coal miner was better paid than the Belgian miner; but in Belgium the women and children worked below ground in the coal mine. The discussion was ultimately adjourned.

On Tuesday morning the report of the French Government Commission on Unwholesome Dwellings was discussed at great length. The conclusions of M. Hudelo, the reporter, were combated in a report drawn up by M. Jourdan. The principle at stake was whether the Commission on Unwholesome Dwellings could deal with the question, or whether, as proposed by M. Jourdan, special salaried inspectors should be appointed to inspect houses and insist on sanitary improvements. The Commissions of Insalubrious Dwellings had rendered great service. At Bordeaux, for instance, they had visited 1800 houses in one year. Would a paid agent have the same moral influence? The commissions were composed of doctors, architects, and engineers, who received no remuneration, and whose opinion was therefore respected. Householders would be more likely to contest the decisions of a mere paid inspector. M. Jourdan insisted that the Commissions which had done good work existed only in large towns, and could not be created in smaller districts. Dr. Pacchiotti remarked that as two sanitary laws were now before the French Parliament, it would be better to wait till their fate was decided. An American delegate related that paid sanitary inspectors in America did their work well, while Mr. Adolphe Smith also alluded to the work done by the sanitary inspectors in England acting under the medical officers of health. The difficulty in France was not to discover insanitary houses, but to find a wholesome dwelling. According to the admirable charts shown at the Exhibition by M. Masson, there were not 2000 sanitary houses in Paris, but about 96,000 insanitary houses. A large handsome room did not make a healthy house. Every house with soil pipes untrapped was unhealthy. It was first necessary to decide what constituted a healthy house. This had been done in Brussels but not in France.

Dr. Janssens, Chief of the Brussels Sanitary Bureau, then explained how, by applying the French law of 1789 and 1790, immense progress had been achieved, and the death-rate reduced from 30 to 22 per 1000. Any complaint led to an inspection, and on report of inspectors the mayor ordered the necessary improvements. If these were not at once executed, the house was declared unfit for human habitation, emptied, and closed. The tenants then prosecuted the landlord and claimed damages for disturbance; consequently the landlords now always and promptly carried out the improvements ordered by the mayor at the suggestion of the sanitary inspectors and bureau. The Congress ultimately unanimously decided that the French law of April 13th, 1850, on unwholesome districts, should be revised. This revision was in the sense of rendering the appointment of commissions on insalubrious districts obligatory throughout France. Some delegates preferring M. Jourdan's proposal, voted against this, but it was carried. Another resolution was adopted unanimously, raising the cubic space per inhabitant from fourteen to sixteen cubic metres, and a final resolution in favour of establishing sanitary bureaux in all towns was approved.

In the afternoon of Tuesday Section 5 discussed the treatment and removal of domestic refuse, what in England is familiarly known as the dust-bin nuisance, but in France is called *la boite à Poubelle*. The discussion in the main was very French in character. Thus it was shown that, in Paris,

where there was little or no cinder, but, on the contrary, a larger quantity of vegetable refuse, the town refuse was worth from 3f. 50c. to 4f. the cubic metre. The reporter on the question, M. Dumesnil, insisted principally on the method for the removal of the refuse, and the resolution carried was to the effect, "That domestic or kitchen refuse should be placed in a metal box or case, which was to be kept clean and disinfected; that it was desirable that the box or case destined to receive the refuse of the entire house should be placed at the disposal of all the tenants in the evening; should be kept in a part of the building where there was a plentiful supply of air; should be provided with a lid easily removed, and kept in a cellar or other place where there is a ventilating shaft." It will be seen that this latter part of the clause only applies to certain towns and houses. Another resolution, to the effect that all refuse should be put outside the dwellings before night and removed daily, was a more sensible proposal to make at an international congress, for it involved principles rather than details of execution, and was carried unanimously and without discussion. In the course of the afternoon it was remarked that in England the contractors were paid to remove the refuse, while in France profits were made. Mr. Shirley Murphy pointed out that the practice in different districts varied, and that it was impossible, without knowing every detail, to compare the one with the other; but where the cost of collection from the houses had to be borne by the contractor, he was paid in London large sums of money for this service. The principal new point raised was the question often put but never satisfactorily answered, whether house refuse could be partially dried and then packed under strong hydraulic or other pressure. Thus reduced in bulk, partially dried (that is, lessened in weight), it would cost much less to transport to distant agricultural districts, where a more ready market would be found.

To-morrow, at 7 A.M., the whole Congress proceeds to Reims, and the next sitting will be held on Thursday.

Paris, Aug. 6th.

MEDICO-PSYCHOLOGICAL ASSOCIATION.

THE annual meeting took place at the rooms of the Medical Society of London on Thursday, July 25th, when the President, Dr. Hayes Newington, delivered an address on Lunatic Asylum Hospitals, of which the following is an abstract.

Dr. NEWINGTON gave credit to Dr. Batty Tuke and Mr. Brudenell Carter for having re-started the discussion, and referred to the article in *The Times* of April 30th, 1889. He showed that the original idea was embodied in sec. 27 of 8 and 9 Vic., c. 126, but it was not followed up and has since been repealed. He vigorously contested the depreciatory account that had been given of the progress in the study of insanity during past years. From the point of view of the efficacy of treatment he showed that 40 per cent. of admissions were cured, and that the balance of admissions contained an enormous proportion of hopeless cases. Eighteen per cent. of all admissions are general paralytics or epileptics; 21·8 are aged fifty-five or over; 22 per cent. are admitted after a year's duration of the disease; and a further 13 per cent. after three months' duration. Looking to the number of such cases, either dead or dying in intellect, the accumulation of chronic cases in asylums could no more be charged with a failure to overcome "brain death" than could the accumulation of a cemetery be laid to the door of general medicine. He uttered a warning that highly coloured statements would procure a refusal on the part of the public to provide hospitals, which are undoubtedly wanted not only for the purpose of gradually increasing our recovery rate if possible, but for teaching insanity to students, as well as for the more elaborate and leisurely study of the disease by professed alienists. The danger is that the public would either take as true all the hard things said, and would refuse to entrust medical men with further and expensive institutions, since they cannot properly use those already under their charge; or the public would, on finding out the real facts, consider that it had been needlessly alarmed by exaggeration, and would be disposed to sleep over the matter. He deprecated any idea that his arguments should be taken as signs of ultra-conservatism on the part of alienists. Alienists, like other scientific persons, looked for improvement; but justice had to be done both to present and past workers in the field of insanity, and the public itself had interests which would be imperilled if it were led to form erroneous opinions as to the present condition of psychiatry. He advocated the establishment of two classes of hospitals; the first to form part of the machinery of county and borough asylums, into which all curable cases should be taken and kept for a certain time, unless, of course, recovery took place; the second to be erected near large towns supporting medical schools. Both are to be under the responsible charge of alienists, but both are to have the advantage of the services of general physicians. In the latter class of hospitals ample provision is to be made for systematic and clinical teaching, much on the lines of a general hospital. He gave considerable details as to the arrangements, the selection of cases, and the duties and relations of the staff.—A discussion followed, in which Drs. Clouston, Savage, Hack Tuke, Yellowlees, Rayner, Whitcombe, Urquhart, Mr. Clark Bell, and others took part.

THE BRITISH NURSES' ASSOCIATION.

THE annual meeting of members was held in the Guildhall, Cambridge, on Wednesday, July 31st, Professor Humphry, F.R.S., in the chair. The hon. secretary, Dr. Bedford Fenwick, read the first annual report, which spoke of an amount of success achieved by the Association which at the inception of the scheme was hardly hoped for. Founded only upon Dec. 7th, 1887, there were already 2537 members enrolled in addition to the branches forming in the Australasian colonies and South Africa, which would add several hundreds to the numbers of the Association, whilst financially the Association was in a most prosperous condition. The subject of registration had been most carefully and thoroughly considered, and the best advice had been taken. In the interests alike of the public and of qualified nurses, and for the protection of both, the General Council had decided to act upon its own initiative, and to open without delay registers of nurses and midwives, and to place on these at once without payment the names of members of the Association. For a few months to come all who had been engaged in nursing for three years and possessed unexceptionable testimonials of knowledge and character would be eligible for registration. But after that brief period of grace and thenceforward only those women who produced certificates of training from a recognised nursing school or diplomas from an obstetrical body would be entered on the registers. When a sufficient number had been enrolled, the General Council proposed to present the petition for a Royal Charter to Her Majesty the Queen in Council. It might be added that the Royal Charter had now been drafted, and, except for some verbal alterations which might hereafter be made, was practically already prepared. Amongst other schemes to be undertaken by the Association was the establishment of a benevolent fund to assist members standing in need of temporary pecuniary assistance. A number of resolutions in accordance with the objects of the meeting, and making requisite alterations in the bye-laws &c., were put and carried, and the proceedings, which were marked throughout by considerable enthusiasm and entire unanimity, came to a close, the members dining in the hall of St. John's College, the vice-chancellor of the University being in the chair.

ARMY MEDICAL SCHOOL.

THE summer session of the Army Medical School was brought to a close on the 2nd instant at Netley. Ten candidates for commissions in H.M.'s Indian Medical Service had passed through the courses of practical instruction at the school. No candidates for commissions in the British service attended during the session, but twenty-four surgeons of the medical staff had gone through a post-graduate course. Sir Dyce Duckworth, M.D., F.R.C.P., accompanied by Director-General W. A. Mackinnon, M.S., C.B., and Surgeon-General Sir Joseph Fayrer, K.C.S.I., F.R.S., arrived from London to distribute the

prizes, which were delivered to the successful competitors, as usual, in the lecture theatre in the presence of the medical and military staff of the Royal Victoria Hospital, professors of the school, and a number of visitors. After handing the prizes with a few appropriate remarks to each recipient, Sir Dyce Duckworth delivered an address, which is printed in full on another page. At the close of the address the Director-General spoke, referring to the time when he was himself among the number of the professorial staff of the school, and he was followed by Sir J. Fayrer, who gave the young surgeons about to proceed to India some valuable counsel derived from his own long experience in that country, and heartily congratulated them on having selected service in India for their future professional career. At the conclusion of the proceedings in the lecture theatre, the meeting adjourned to the officers' mess-room, where luncheon was served.

We publish in another column the list of successful candidates for commissions in the Indian Medical Service, and the number of marks gained by them, together with the names of the surgeons to whom prizes were awarded.

MALCOLM MORRIS INDEMNITY FUND.

THE following additional subscriptions to the above fund have been received :—

	£	s.	d.
Amount previously acknowledged	428	7	0
Sir William Gull	5	0	0
D. J. Woodman, Esq. ..	5	5	0
Dr. Corfield	2	2	0
Dr. M. Barnes	1	1	0
Dr. T. Morton	1	1	0
Dr. Allchin	1	1	0
W. J. Walsham, Esq. ..	1	1	0
Dr. Macnaughton Jones	1	1	0
E. Nettleship, Esq. ..	1	1	0
Herbert W. Allingham, Esq.	1	1	0
Dr. Henry C. Martin ..	1	1	0
Dr. H. Cooper Rose ..	1	1	0
Dr. Riding	1	1	0
Dr. T. Britton (Harrogate)	1	1	0
Bruce Clarke, Esq.	0	10	0

The costs amount to £480. Subscriptions may be sent to Mr. G. P. Field, 34, Wimpole-street, or to Dr. Sidney Phillips, 21, Upper Berkeley-street, who will be glad to receive subscriptions which have been promised but not yet sent.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

Fatal "Croup" &c. in the Horwich Registration District, by Mr. J. SPEAR.—Another of those prevalences of diphtheria, of a more or less marked type, masked under such names as "croup" &c. has occurred in the Horwich registration district. The term diphtheria having been more freely used towards the end of 1887 and the beginning of 1888 than during the earlier part of the prevalence, the matter at last came under the notice of the Local Government Board, and Mr. Spear was instructed to inquire into the occurrence. It now appears that between the beginning of 1884 and the end of the first quarter of 1889 an outbreak causing no less than 57 deaths took place in this registration district, all but 3 of the deaths being registered in the Horwich and in the Westhoughton urban districts, having together an estimated population of some 214,000 persons. Of 26 fatal attacks up to the end of 1887, only one was registered as diphtheria, the remainder being described under such terms as croup, tracheitis, cynanche trachealis, and laryngitis. And of 27 deaths in 1888 only 4 were put down to diphtheria. The subjects were nearly all young children, and in 3 of the "croup" cases membrane is said to have been visible either on the pharynx or as the result of expectoration. In dealing with the cases that came within review Mr. Spear says that in the more obvious general symptomatology little differentiation was found possible between the fatal affections, whether described as croup, tracheitis, or laryngitis; and speaking again of non-fatal attacks, he says that on the whole the testimony available suggested that under such names diseases of a different etiology had been included, and that although in some half-dozen cases the history was that of diphtheria, yet the non-fatal attacks were rarely in the same neighbourhood, or apparently associated with the fatal attacks. It is next pointed out that the 38 fatalities ascribed to "croup, tracheitis, and laryngitis" occurred in 35 different households, in 26 of which no other similar attack, or, indeed any of diphtheria or noticeable sore-throat, occurred, although they contained some 78 other children or young people; and we rather infer from this that Mr. Spear inclines to the view that these cases were in some respects different from diphtheria. But the exceptional cases show that what is termed "laryngitis" led to multiple attacks in the same households, whether of the same complaint or of what is termed either sore-throat or croup; that when diphtheria of a typical type took place this was followed by so-called croup; that croup cases were followed by other croup cases; and that diphtheria in one case attacked an adult who had been nursing a croup patient. The truth is, that there is nothing so very exceptional in genuine diphtheria being limited to single attacks in households; its power for spread being at times very different from that which obtains at others. Indeed, of six fatal attacks from "diphtheria" reported by Mr. Spear, three were single ones, whereas two occurred in houses where fatal attacks of croup had taken place, the remaining one being associated with two mild attacks in the family invaded, and probably with two or three elsewhere. Mr. Spear next adverts to the coexistence of measles and scarlatina with some of the fatal attacks registered as croup or laryngitis, a coincidence which he is inclined not to regard as accidental. Looking to the whole of this statement about throat illness, fatal and non-fatal, forming apparently an epidemic, we cannot help thinking that an almost artificial attempt is made to differentiate between the several diseases. Whilst we would by no means deny the possibility of occurrences of laryngitis or of croup, merely because a diphtheria prevalence was in progress, yet we cannot help thinking that the knowledge we have recently acquired as to the natural history of diphtheria goes to show that all which occurred during the prevalence under consideration is entirely consistent with the view that throughout the disease met with was diphtheria, in so far as that term can be regarded as covering a single specific disease, the affection merely manifesting certain of those modifications, alike as to local symptoms, power of spread, and otherwise, which are known to have marked its course in outbreaks where no question whatever has arisen that it was diphtheria and no other disease, that was met with.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 5770 births and 3763 deaths were registered during the week ending Aug. 3rd. The annual rate of mortality in these towns, which had been 21·0 per 1000 in each of the preceding two weeks, declined to 20·5 last week. During the first five weeks of the current quarter the death-rate in these towns averaged 20·3 per 1000, and was 0·1 above the mean rate in the corresponding periods of the ten years 1879-88. The lowest rates in these towns last week were 14·1 in Brighton, 14·8 in Birkenhead, and 15·7 in Bristol and in Huddersfield. The rates in the other towns ranged upwards to 25·9 in Newcastle-upon-Tyne, 27·0 in Manchester, 28·8 in Sunderland, and 42·6 in Preston. The deaths referred to the principal zymotic diseases in these towns, which had been 1018 and 998 in the preceding two weeks, further declined last week to 891; they included 578 from diarrhœa, 79 from measles, 69 from whooping-cough, 65 from diphtheria, 59 from scarlet fever, 41 from "fever" (principally enteric), and not one from small-pox. These zymotic diseases caused the lowest death-rates last week in Wolverhampton, Derby, and Huddersfield, and the highest rates in Salford, Sunderland, Plymouth, and Preston. The greatest mortality from diarrhœa occurred in Salford, Sunderland, Birmingham, Leicester, and Preston; from measles in Plymouth, Newcastle-upon-Tyne, Leeds, Halifax, and Preston; from scarlet fever in Huddersfield, Bolton, and Plymouth; from whooping-cough in Portsmouth and Sunderland; and from "fever" in Preston. The deaths from diphtheria included 45 in London, 5 in Manchester, 3 in Salford, and 3 in Sunderland. Small-pox caused no death in any of the twenty-eight great towns; and no small-pox patient was under treatment at the end of the week either

in the Metropolitan Asylum Hospitals or in the Highgate Small-pox Hospital. The number of scarlet-fever patients in the Metropolitan Asylum and London Fever Hospitals at the end of last week was 727, against numbers increasing in the preceding five weeks from 559 to 660; 124 cases were admitted to these hospitals during the week, against numbers increasing from 33 to 110 in the previous seven weeks. The deaths referred to diseases of the respiratory organs in London, which had been 141 and 160 in the preceding two weeks, further rose last week to 182, but were 11 below the corrected average. The causes of 76, or 2·1 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Norwich, Plymouth, Wolverhampton, and in four other smaller towns. The largest proportions of uncertified deaths were registered in Birmingham, Halifax, and Liverpool.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 19·6 and 17·9 per 1000 in the preceding two weeks, rose again to 18·3 in the week ending August 3rd; this rate was 2·2 below the mean rate during the same week in the twenty-eight large English towns. The rates in these Scotch towns ranged last week from 12·4 and 12·7 in Dundee and Perth to 25·2 in Leith and 27·4 in Paisley. The 468 deaths in the eight towns showed an increase of 9 upon the number in the previous week, and included 39 which were referred to diarrhœa, 15 to whooping-cough, 8 to measles, 7 to "fever" (principally enteric), 4 to scarlet fever, 4 to diphtheria, and not one to small-pox; in all, 77 deaths resulted from these principal zymotic diseases, against numbers increasing from 81 to 95 in the preceding four weeks. These 77 deaths were equal to an annual rate of 3·0 per 1000, which was 1·9 below the mean rate from the same diseases in the twenty-eight English towns. The deaths referred to diarrhœa, which had risen in the preceding five weeks from 17 to 41, declined to 39 last week, but exceeded by 17 the number in the corresponding week of last year. The 15 fatal cases of whooping-cough showed a decline of 6 from the number recorded in the previous week, and included 6 in Glasgow and 3 in Edinburgh. The deaths from measles, which had been 18 and 20 in the preceding two weeks, declined to 8 last week, of which 3 occurred in Edinburgh and 2 in Aberdeen. The 7 fatal cases of "fever" exceeded by 3 the number in the previous week, and included 5 in Glasgow. Of the 4 deaths attributed to diphtheria, 2 occurred in Leith, and of the 4 fatal cases of scarlet fever, 2 were returned in Glasgow. The deaths referred to the principal diseases of the respiratory organs, which had been 66 and 59 in the preceding two weeks, were 60 last week, and slightly exceeded the number in the corresponding week of last year. The causes of 54, or nearly 12 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had increased from 16·3 to 24·8 per 1000 in the preceding three weeks, declined again to 20·7 in the week ending Aug. 3rd. During the first five weeks of the current quarter the death-rate in the city averaged 21·5, the mean rate during the same period being 18·2 in London and 16·4 in Edinburgh. The 140 deaths in Dublin showed a decline of 24 from the number in the preceding week; they included 8 which were referred to diarrhœa, 4 to measles, 2 to "fever," 1 to whooping-cough, and not one either to small-pox, scarlet fever, or diphtheria. Thus the deaths from these principal zymotic diseases, which had been 25 and 23 in the previous two weeks, further declined to 15 last week; they were equal to an annual rate of 2·2 per 1000, the rate from the same diseases being 3·7 in London and 2·3 in Edinburgh. The deaths referred to diarrhœa showed a further decline from those recorded in recent weeks; the fatal cases of "fever" and of whooping-cough were also fewer than those registered in the preceding week. The deaths of infants showed a marked increase, while those of elderly persons were below those recorded in the previous week. One inquest case and 1 death from violence were registered; and 47, or more than a third, of the deaths occurred in public institutions. The causes of 16, or more than 11 per cent., of the deaths in the city were not certified.

INFANT AND CHILD MORTALITY IN MOSCOW.

The city of Moscow now issues a monthly return of mortality statistics, which is a sign, at any rate, that its inhabitants are supplied with the means of testing its sanitary condition by its death-rate. It appears from these returns that the population of the city in 1882 was 753,469, and not far short of that of St. Petersburg. Estimating the present population of the city at 800,000, the annual birth-rate during the first five months of this year was equal to 41·3 and the death-rate to 37·2 per 1000; these rates are probably understated by an over-estimate of the present population. The official return not only gives the deaths at different age periods, but also the ages of the population at the same groups of ages. From this it appears that the proportion of children in the population was remarkably small. The proportion of children aged under five years of age is stated to have been in 1882 only 60 per 1000, whereas in London the proportion living in 1881 at these ages was 130 per 1000. This small proportion of living children in Moscow may be partly due to the remarkably high rate of infant mortality that appears to prevail there. During the first five months of this year the deaths of infants aged under one year in Moscow were equal to 389 per 1000 registered births, whereas in London this proportion of infant mortality did not exceed 124, or less than a third of the rate in Moscow. The death-rate among children aged between one and five years does not show so large an excess as does that of infants under one year; but, based upon the ages of the Moscow population given in the return, the annual death-rate of children aged under five years in that city, in the five months under notice, was equal to 138·6 per 1000, and was more than double the recent death-rate at these ages in London. As throwing some light upon this startlingly high death-rate of children in Moscow, we may point out that the returns before us show death-rates from "fever," diphtheria, scarlet fever, measles, and diarrhœa enormously exceeding those recorded in English towns. We must content ourselves with noticing that the annual death-rates from diphtheria and diarrhœa in Moscow during the five months ending May last were equal to 1·01 and 6·12 per 1000, whereas the rates from those diseases in London during the same period did not exceed 0·31 and 0·20 per 1000 respectively. Thus diphtheria was more than three times and diarrhœa more than thirty times as fatal in Moscow as in London. With reference to the mortality from diphtheria in Moscow, it should, moreover, be stated that the deaths referred in the five months to croup and to "pneumonia crouposa," both headings classed among the principal zymotic diseases, considerably exceeded those returned under the heading "diphtheritis."

HEALTH OF MEXICO.

Dr. Daniel Kuiz, of Vera Cruz, has recently drawn up a report on the mortality in the canton of Vera Cruz, from which we learn that the most prevalent diseases are those affecting the lungs. Miasmatic diseases account for only 164 deaths out of 1101 last year in the city itself, but they were responsible for an immense amount of sickness, which did not prove fatal, but which considerably lowered the general standard of health. Lung diseases and paludal fevers are so general that one has only to pass down a crowded street to see their effects in the contracted chests, anæmic complexions, and thin limbs of the passers by. Even the police, who are a picked body of men, are characterised, though in a somewhat less degree perhaps, by the same evidences of the effects of the treacherous climate. The cargadors (porters) are, physically speaking, the finest class, possessing broader chests and better developed limbs than the great majority of the population. The reasons of this physical superiority are threefold: (*a*) the cargador's work, while it lasts, is severe, and weak persons are not admitted into the brotherhood; (*b*) the cargador is well paid and well fed; (*c*) he takes sufficient physical exercise in the open air, which with the other classes is, in consequence of the climate being so hot, damp, and enervating, the exception rather than the rule. Another cause of the weak chests and the anæmia which are so prevalent may be found in the custom which obtains of very early marriages. The climate is again at fault, for it develops both sexes very early, and girls are sometimes wives at fourteen and mothers at fifteen, whilst marriages at sixteen are not at all unfrequent. These early marriages are not unprolific, but the children of them are, as a rule, weakly, the mortality amongst them is great, and the survivors help to lower the general standard of health.

Correspondence.

"Audi alteram partem."

VACCINATION AND INFANTILE SYPHILIS.

To the Editors of THE LANCET.

SIRS,—With your kind permission I wish, albeit somewhat late in the day, to make one or two remarks on a matter which press of work prevented me from taking up at the proper time, but which has again cropped up in your leading article of July 27th. I refer to the argument derivable from Scotch registration statistics regarding the relationship between vaccination and infantile syphilis, and to Dr. Creighton's connexion therewith.

The argument, as I have put it in "Vaccination Vindicated," pp. 136–38, is, in three parts, briefly as follows:—1. Opponents of vaccination hold that because deaths from syphilis have largely increased in the first year of life, "the year of vaccination," the increment is to a great extent due to that operation. Regarding this, the question at once arises, Have the deaths taken place mainly before or after the performance of "the rite"? The answer is to be found in the tables of the Scotch Registrar-General, in which the first year of life is divided into three periods: 0–3 months, 3–6 months, and 6–12 months. Here are the figures for three recent years:—

Deaths from Syphilis in Scotland at certain Ages.

Year.	0 to 3 months.	3 to 6 months.	6 to 12 months.	1 to 2 years.	All ages.
1882	109	44	39	16	244
1883	107	51	23	16	240
1884	117	57	26	14	276
Totals	333	152	88	46	760
Per cent. ..	43·8	21·3	11·6	6	100

But in Scotland vaccination is not compulsory until six months, so that of deaths from syphilis at all ages this table shows that no less than 65 per cent., or about two out of every three, take place before the age of vaccination; and in the second half year of life, when vaccinal syphilis ought to be rampant, the deaths fall to 11·6 per cent., or less than one-fifth of those in the prevaccination half year. 2. If vaccination were responsible for any considerable part of the infantile syphilitic mortality, then, as the operation is compulsory three months earlier in England than in Scotland, the former country should, in the first half year of life, have a correspondingly higher share of the deaths But in the same three years the percentages were, under six months, 64·5; from six to twelve months, 11·3; and from one to two years, 6·1. The remarkable similarity of these figures to those given above, shows that vaccination has nothing whatever to do with the comparative syphilitic mortality of the two countries. 3. The powerlessness of vaccination to propagate syphilis may be shown even more clearly. Anti-vaccinationists have pointed out that the mortality has risen more rapidly under one year than at all ages combined. The question again is, In what part of the first year has the increase occurred? The Scotch registrar once more gives the answer. (The Vaccination Act of Scotland was passed in 1863.)

Deaths from Syphilis in Scotland, 1855–9 and 1880–4.

Five years.		Under one year of age. 0 to 3 months.	3 to 6 months.	6 to 12 months.	All other ages.	All ages.
1855–9.	Deaths ..	142	81	42	116	381
	Per cent. ..	37·3	21·3	11·0	30·4	100
1880–4.	Deaths ..	540	242	147	284	1213
	Per cent. ..	44·5	20·0	12·1	23·4	100

Thus the deaths from syphilis have grown from 381 to 1213, an increase much more rapid than that of the population. Further, the population under one year formerly contributed only 70 per cent. of the total, and now it contributes 77 per cent. Seven per cent. has thus been transferred to "the year of vaccination." But, on looking at the figures it will be seen that *the whole 7 per cent. is accounted for by infants under three months old—the three months of non-vaccination*, so that of course vaccination is not a factor in the case.

Such, in brief, is the argument from the Scotch statistics. Your issue of Dec. 1st last contained a letter from Dr. Creighton, occasioned by a valuable criticism in your columns of the previous week. In it Dr. Creighton said, "I showed also, by reference to the registration figures for Scotland, that most of the deaths from infantile syphilis happened in the first three months of infancy, whereas the statutory limit of vaccination in that country is six months. Dr. McVail used that argument, doubtless independently, in his book published two months after mine, and he has been duly commended in your own columns and elsewhere for establishing a fact so well calculated to meet the alarmist charges against vaccination. But the argument from the Scottish statistics was first established by myself."

Passing by the fact that I have not been commended, either duly or unduly, in your columns for establishing the point in question, I now turn to the reference given by Dr. Creighton, and find that on p. 153 of "Cow-pox and Vaccinal Syphilis," he says that "probably" it is the case that "a great part" of the increased syphilitic mortality under one year "will have to be looked for" elsewhere "before we go to vaccination as a last resort." Then he goes on: "This is made all the more likely by an examination of the more recent registration returns for Scotland, which give the mortality in separate columns for the first three months of life, the second three months, and the next six months; if these returns may be taken as showing forth the incidence upon the several quarters of the first year for England also, we should have the significant fact that considerably more than half the deaths from syphilis under the age of one belong to the first three months of infancy." He adds, however, that "that fact certainly does not make absolutely against the hypothesis of an increase being due to vaccinal infection." This is positively the only reference to Scotch statistics that Dr. Creighton's book contains, and on this slender basis he rests his claim to have "established the argument." The point is in itself a trifling one, but it is a valuable indication as to the amount of proof which Dr. Creighton thinks sufficient in forming a conclusion. He is of opinion that he has "established" a number of new points. He has proved, he believes, that the milkers' tradition of the anti-variolous power of cow-pox was "an old wife's fable,"[1] that the variolous test, as practised by the early vaccinators, was a sham, that cow-pox has its analogue not in small-pox but in syphilis, that vaccination is nothing but a "grotesque superstition," and that its author, Jenner, "went blundering into visionary nonsense in the first place, and at length into systematic mystification and chicane." Let any reader of Dr. Creighton's books, who has not the opportunity of consulting the evidence at first hand, recollect in regard to such assertions how little in the way of demonstration it takes to satisfy the doctor that he has "established" his argument.

Questions of priority in such matters are as a rule of merely personal interest, and in regard to that incidentally mentioned by Dr. Creighton, I will only remark that, as he courteously suggests, my reference to the Scotch argument was quite independent of his, though his book was published two months before mine. The necessary figures had been obtained by me from the English Registrar-General many months before, and indeed even after the manuscript was in the printer's hands, its publication was, owing mainly to illness, delayed for about half a year.

I am, Sirs, yours sincerely,

Aug. 5th, 1889. JOHN C. MCVAIL.

THE SANITARY ASPECT OF BOVINE TUBERCULOSIS.

To the Editors of THE LANCET.

SIRS,—In connexion with the above subject, it has afforded me unfeigned pleasure—and I think I may say that it will have given equal pleasure to all veterinarians interested in the question—to observe that, according to an

[1] In a review of Dr. Creighton's writings on vaccination, of which the first part appears in the current number of the Edinburgh Medical Journal, I have discussed this question somewhat fully.

announcement at p. 220 of your last issue, the decision of Sheriff Principal Berry in the tuberculosis case recently tried at Glasgow has met with such marked acceptance at the hands of so important a body as the combination of Medical Officers of Health of the North-western and Yorkshire branches of the Society of Medical Officers. Coming so closely upon the combination which was escheloned in Glasgow, with the view of assisting the Association of Butchers in its object of perpetuating the pernicious system previously so largely in vogue in Glasgow of passing the carcasses of tuberculous cattle for human food, it is very refreshing. To me the spectacle of a phalanx of medical officers of health arrayed on the side of those who wished to perpetuate the sale of the flesh of animals that had suffered from "*the scourge of the human and animal race alike*" was truly melancholy; and there was, it seemed to me, a certain tinge of irony in the circumstance, seeing that, in addition to the fact that so long ago as 1872 this matter was exhaustively discussed at a meeting of the West of Scotland Veterinary Medical Association held at Glasgow, the subject was brought before the Sanitary Association of Scotland and the British Medical Association in the Western City so recently as last year. In whatever way the action of the medical officers of health just referred to may be interpreted, there can only be one interpretation of the action of the medical officers of health of the North-Western and Yorkshire Combination; and I promise (or I think I may safely do so) all such combinations or associations that in this matter they will have the energetic and earnest support of the veterinary associations throughout the kingdom. In your issue of the 3rd inst. I also notice a recommendation of the Streets Committee of the Darlington Corporation to the Council (of that town I presume) in connexion with the use of milk from tuberculous cows. Personally, I shall watch with more than ordinary interest the outcome of this recommendation, especially as, so far as I know, there is no law at present in existence which enables the Darlington or any other Corporation to deal with animals (found in byres) suffering from tuberculosis, or with the milk from such animals. I am, Sirs, your obedient servant,

Royal Veterinary Col. Edin., Aug. 6th, 1889. THOS. WALLEY.

PHTHISIS IN THE BRITISH ARMY.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of July 4th you noticed a statement of Dr. R. Schmidt of Munich, that the cases of phthisis in the English army were 11·8 and the deaths 6·2 per 1000, but you very properly observed he neither indicated the source of his information, nor the period it embraced, nor, I would add, the countries they occupied. In THE LANCET for July 27th you offer some comments on Dr. Schmidt's ratios, derived from Dr. Parkes's "Manual of Hygiene" (fourth edition), on the frequency of phthisis up to 1871, and add to these from recent Reports on the Health of the Army up to 1885. Dr. Parkes pointed out that the deaths from phthisis in the service did not show the full effect of the influences giving rise to that disease among soldiers, and that the mortality among those discharged on account of it had to be taken into consideration, but he made no estimate of the amount of this correction. In like manner, the numbers you have taken from the medical reports deal with the deaths in the service only, and do not include any of those among the invalids after leaving it.

In January, 1887, I read a paper at the Royal Statistical Society "On the Mortality among the Troops serving in the United Kingdom from Consumption," in which the deaths of invalids from this disease were included, and the reasons for their diminution in recent years fully gone into. It had been found that about half of those so discharged died within two years, and, as all of them had active pulmonary disease with considerable destruction of pulmonary tissue on leaving the service, the mortality among them would at least equal that in a similar number of persons in civil life in whom the disease was equally advanced; it was considered the early death of half their number would not deviate materially from the truth. In estimating the mortality from consumption due to military service, half the number discharged for this disease were therefore added to the deaths from it in the service, which gives a much closer approximation to the loss of life caused by the disease in the army than is generally adopted.

The following table taken from the paper in the Journal of the Royal Statistical Society (vol. l., p. 470), shows, in the first column, what the deaths from consumption among the troops would have been in the United Kingdom, with their peculiar age distribution, and at the rates observed among the male population of England and Wales at the corresponding ages. The second column shows the deaths which actually occurred in the service; the third gives the half of the discharges for phthisis; and the last the sums of these two, or the total deaths due to military service in the United Kingdom at each period. The total deaths have

Periods.	Phthisis in army at civil rates, per 1000.	Phthisis observed, per 1000.		
		Deaths.	Half of discharges.	Total deaths.
1837–46	5·09	8·53	0·85	9·38
1860–64	3·63	3·07	2·70	5·77
1865–69	3·81	2·57	2·26	4·83
1870–74	3·39	2·43	2·21	4·64
1875–79	3·21	2·45	2·22	4·67
1880–84	2·70	1·92	1·71	3·63

diminished nearly two-thirds of their amount from 1837–46 to 1880–84, but in every period they have considerably exceeded what would have occurred among the same body of men in civil life. It would occupy too much of your space to go into detailed explanations of these changes here, and I have accordingly to refer such of your readers as wish for further information on these points to the original paper.

The following statement of deaths per 1000 from phthisis in the different groups of foreign stations, including those of invalids from them on passage home, and until disposed

Stations.	1859–73.	1879–84.
Mediterranean	3·29	2·18
American	3·20	2·78
West Indian	3·42	2·14
Cape of Good Hope and Natal	3·09	1·35
Mauritius and Ceylon	3·80	3·20

of, and half the number of men discharged for it, for 1859–73 and 1879–84, shows there has been a manifest reduction of that disease abroad as well as at home.

I am, Sirs, your obedient servant,

ROBERT LAWSON.

London, Aug. 2nd, 1889. Inspector-General of Hospitals.

*** In our annotation of July 27th we gave the death-rate from phthisis *in* the service, not that caused *by* the service. Our remarks were made with reference to Dr. Schmidt's comparison of the number of cases and deaths in different armies. As there was nothing stated regarding the amount of invaliding for phthisis from each of these, we could not make the correction necessary to show the probable number of deaths among men after their removal from the effective strength on this account. Our remarks therefore applied only to the relative prevalence and mortality among soldiers while serving.—ED. L.

THE NOTIFICATION OF INFECTIOUS DISEASES BILL.

To the Editors of THE LANCET.

SIRS,—General practitioners throughout the country are greatly indebted to you for the able articles which you have recently published on this subject, especially for that of July 20th, which has been of the greatest service. There cannot be a doubt that the majority of the profession are in favour of notification as a means of checking the spread of infectious diseases. Our objection is not to notification, but to the mode in which Mr. Ritchie's Bill seeks to have it carried out. We agree that it should be the duty of the householder or person in charge of the patient to notify, but we regard it as a departure from strict right, and also inexpedient, to require direct notification on the part of the medical

attendant, when the latter is called in at the discretion and expense of the householder. By throwing the duty on the medical man, the promoters of the Bill confess that they do not expect the householder to do his part; and, indeed, where the dual system is in force under local Acts, the householder's report is generally dispensed with, two accounts of the same case being only embarrassing to the authorities. Similarly, there have been about a score of prosecutions of medical men, but of householders barely a fourth of that number (I cannot recall more than three). Surely this is not the way in which to teach the people, that "England expects every man to do his duty." It would be far preferable to insist on notification by the person primarily liable, and not to let ignorance be any excuse, except from inability to obtain a medical certificate.

The party of private practitioners to which I belong is quite willing to be under compulsion to certify in a case of infectious disease just as we do to the cause of death and to vaccination. But we regard it as unprofessional and un-English to send the information to the authorities direct, except at the householder's request. It is repugnant to our nature to bring the healing balm in one hand and the hangman's rope in the other.

We are therefore persuaded that the dual system of notification is wrong in principle. It has also been proved to be worse than useless in practice; for, in the year 1887, when the death-rate from zymotic diseases was high throughout the country, and when consequently there was an excellent opportunity for showing the superiority of that system, it lamentably failed—so much so that the large towns under the dual system lost 206 per million more persons from *notifiable* diseases than died of the same diseases in the large towns under no system. The same thing holds when a series of years is taken: the dual system is worse than useless. And no wonder; for it leads the public to regard the doctor as their natural enemy, as one who will turn upon them for a paltry half-crown. Accordingly, they put off sending for him as long as they possibly can, and until the mischief is done which he could have prevented.

The single, or householder, system has no such ill effects, and in proof of this I can confidently appeal to the Registrar-General's returns for Bradford and Norwich.

If Mr. Ritchie will only transform his Bill so as to embody the single system of notification (as carried out in Bradford), instead of the dual system, and then make its acceptance unconditional throughout the country, we shall all be pleased. It will then be a good and strong measure (which it certainly is not at present), and he will find it perfectly efficient.—I am, Sirs, yours faithfully,

Kingston-on-Thames, Aug. 7th, 1889. D. BIDDLE.

TREATMENT OF HIP-JOINT DISEASE.

To the Editors of THE LANCET.

SIRS,—In his recent interesting lectures at the Royal College of Surgeons, Mr. Howard Marsh refers at some length to my experience on the question of hip disease. I should like to take the opportunity of thanking him for his kindly reference to me, and he will not, I am sure, take it amiss if I venture to point out certain, as I think, fallacies in his statistics, and in the conclusions he draws therefrom. I am the more anxious to do this because a similar mode of reasoning is being constantly brought forward by those who, lacking Mr. Marsh's moderation, seek to discredit all operations of the nature of excisions in the treatment of joint disease.

Mr. Marsh first refers to the results of treatment other than excision in the case of the hip-joint. He gives the results of 76 cases, of which 37 had abscesses and the rest had not suppurated. Mr. Marsh then analyses the results in these cases, comparing them with the results of excision, naturally to the disadvantage of the operation. But it is not, I think, unreasonable to say that the comparison is not valid, and that no such conclusion can be drawn from these figures. For in the first place more than half Mr. Marsh's cases were those of disease in which no suppuration had taken place—i.e., of early disease in which a good result would naturally be expected without operation. Secondly, the figures are taken from a comparatively small proportion (76 out of 160 written to) of those selected. To make out the case against operation, we ought to know what became of the 84 who did not appear. Is it not possible that death, or what one of my patients graphically called "permanent cripplehood," may have had something to do with the absence of the others? This would, of course, invalidate the conclusions altogether, since only the recoveries would come. My conclusions, on the other hand, were based on the results of the whole of the cases (except one) treated by a certain method.

Mr. Marsh next takes 614 cases treated since 1880 at the Alexandra Hip Hospital, with a mortality of 6 per cent., or including incurables, 8·4 per cent. These are compared with my cases of excision, with a mortality of 20 per cent. But is there not a clear fallacy here? Were Mr. Marsh's 614 all cases in which suppuration had occurred, or the disease was as far advanced as in my excision cases? If any of these 614 were cases of early slight disease, the comparison of course falls to the ground. To compare two different modes of treatment, must we not require that they be employed in similar cases?

Consideration for your space prevents my commenting upon much that is valuable and interesting in Mr. Marsh's lectures. Two points, however, I must ask you to allow me to mention. First, that I do not think that the evidence of the Alexandra Hip Hospital is conclusive on the subject of the frequency of necrosis. My own experience, and I think Mr. R. W. Parker would agree with me, is that I have frequently found necrosis, and I think I can give an explanation that is probable of the difference in our views. In the Alexandra Hospital patients are kept in for an indefinite time, and therefore are not under the unfavourable conditions of liability to frequent exacerbations of disease from periods of neglect that ordinary hospital patients are. Hence I can well imagine not only that Mr. Marsh's results are better than those of other hospital surgeons, but that he sees less of necrosis.

May I lastly point out that many writers on the subject of operation in joint disease (among whom I should not class Mr. Marsh) write as if those who advocate excision never employ any treatment short of operation? They do not seem to realise, what everyone surely admits, that the number of joints requiring operation is small compared with those that recover without, *provided suitable treatment can be carried out*. What those who condemn excision *in toto* require to make out their case is to produce a large series of consecutive cases of the same degree of disease in the same class of patient as those which have been published by operators, and to show a better result without operation. I am fully aware of the difficulty of compiling such a report accurately, but it is, I think, the only way in which a valid conclusion can be arrived at.

I am, Sirs, yours faithfully,

Manchester, July 30th, 1889. G. A. WRIGHT.

PROFESSIONAL TATTLE.

To the Editors of THE LANCET.

SIRS,—Your remarks in a leader in a recent issue of THE LANCET condemning certain articles which have appeared in non-medical public journals on the death-bed scenes and sayings of celebrated men were much needed and timely. What objects the writers of these articles have set before them it is not easy to discover. To themselves we scarcely think there can accrue either honour or profit, if we except the brief popularity they may obtain, and in the surviving relatives, whose sacred feelings they thus violate, they can only create pain and disgust. During a fairly long professional life I have seen many things to deplore in medical practice, but hitherto, wherever I have lived and whatever grade of professional life has presented itself to me, I have ever felt that the secrets of the time of sickness and its frailty and weaknesses were held inviolate by the family medical man. Of late, however, all is changed, and we seem to have become on these matters as garrulous as the Barber of Seville, and if this evil is not sternly and speedily checked amongst us, we must not wonder if the public should lose all confidence in us and all their wonted respect for us and our profession. I am personally gratified that you have taken up this important matter.

I remain, Sirs, yours obediently,

King's Lynn, Aug. 5th, 1889. WM. DALE, M.D. Lond., &c.

DR. DETTWEILER'S POCKET-FLASK FOR THE DISPOSAL OF THE SPUTA IN PHTHISIS.

To the Editors of THE LANCET.

SIRS,—Dr. Arthur Hill Hassall has given most sensible advice in his paper "On the Disposal of the Sputa in Phthisis," printed in THE LANCET of July 27th. He

justly dwells on the danger of infection arising from the dried sputa when inhaled as dust, and he shows that the practice of spitting on the floor of rooms, or on the pavement of streets, or into handkerchiefs, is very injudicious. Dr. Hassall recommends the introduction of spittoons into all the rooms where consumptive people dwell, and the regular disinfecting and removal of the contents. As, however, spittoons are not to be found in the streets and in railway carriages and other vehicles, I venture to direct attention to the suggestion of Dr. Dettweiler of Falkenstein, that every consumptive person should carry a small flask and always expectorate into it. He has constructed such a flask, which he calls "Taschenfläschchen für Hestunde"—"pocket-flask for coughers." Dr. Dettweiler read a paper on this subject in April last, at the meeting of the Congress for Clinical Medicine at Wiesbaden. There would probably be no difficulty in obtaining the flask through surgical instrument makers. The contents of this flask can easily be disinfected once or twice a day by a solution of perchloride of mercury or other disinfectant; one part of perchloride to 200 of water, when thoroughly rubbed up with the sputa would, I should think, render the sputa perfectly innocuous.

To many persons such a suggestion may seem a very small matter, but the hygienic importance is very great.

I am, Sirs, yours faithfully,

Grosvenor-street, W., Aug. 1st, 1889. HERMANN WEBER.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Cremation of Dogs.

A WISE REGULATION is now in force here, which gives a sense of public security with regard to stray dogs. It is this: Certain members of the police force are told off to dispose of ownerless dogs which may be found straying about the town. Armed with a lasso, they seize their unsuspecting victims and lead them off to the place of execution. The killing process is effected by a dose of prussic acid, and the bodies are cast into a furnace used for burning the refuse from the interception of the sewage. Numbers of mongrels and curs of low degree are thus got rid of, to the relief of timid pedestrians.

Alleged Bad Meat Prosecution.

In the endeavour to secure a conviction in this important direction it is necessary to be careful that the arrangements are complete from a legal point of view. A butcher was summoned for exposing for sale a quantity of meat alleged to be bad, the number of pieces being specified. The prosecution wished to amend the summons by adding to the list of pieces exposed eighteen calves' hearts. This was objected to, and the proposed method of dealing with the case was characterised as very slipshod. The summons was withdrawn, and the bench ordered the corporation to pay all the witnesses 2*s.* 6*d.* expenses, and the defendant's solicitor a guinea.

The Pains of Childbirth

are usually stated to be extreme in comparison with other pains, yet occasionally it would seem not to be a difficult process. A young single woman retired to an outhouse, and shortly afterwards a full-grown child weighing 8 lb. was heard crying in the midden. Unfortunately, it could not be rescued before it was suffocated. The mother did not appear to be much the worse for passing through an ordeal which at times tries the nerves of the strongest women. She now awaits her trial for infanticide.

Bank Holiday.

The desire for change and excitement of various kinds is associated with the mode of life in large towns, and yearly increases. The scenes at the railway-stations this year have been unprecedented, and crowds have been unable to gratify their pleasurable instincts by distant journeys out of town. The woes of excursionists have been depicted in the local press, and remarkable instances given of the endurance and long-suffering gone through in the pursuit of pleasure. The followers of Epicurus would have hesitated to accept the conditions imposed in many instances for the prospects afforded—prospects more often never realised, and the precursors of many an aching head and weary limbs for days following. How far this excitement tends to the well-being of the community it is not difficult to estimate; such an artificial struggle cannot tend to health, though it may lead to sacrifice of the better impulses which promote true enjoyment and real recreation.

Birmingham, Aug. 7th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Newcastle Royal Infirmary.

AT the quarterly meeting of the Newcastle Royal Infirmary, held last week, it was stated that the subscriptions from the working men during the quarter had been £1669, being an increase of £229. So that the experiment, if it may be so called, of admitting working men to the governorships has been a complete success, and might perhaps be followed with advantage elsewhere when similar institutions are languishing from want of funds, and complaining that the working classes do not take a more active part in their support.

Sunderland.

The annual report of the Sunderland Infirmary is a satisfactory one. The *employés* connected with the various industries of the town have subscribed to the amount of £3783, being an increase of nearly £1000 over their contributions of last year. The medical report again shows a considerable advance in the number of patients treated in the infirmary over last year, the number being 4833, an increase of 933. The number of in-patients was 1770, an increase of 63. There had also been an increase in the out-patients and surgical accidents. The infirmary is nursed by sisters from the Tottenham Training Institution at a very small cost; and it is recommended by the governors that a fund should be established to make some provision for such sisters as are unable to continue their beneficent work from sickness, old age, or any infirmity. This fund will be commenced by a deduction of £100 from the infirmary receipts for the year ending June, 1890. I hear that Mr. A. E. Harris, who has been medical officer of health in Sunderland for nearly eight years, is a candidate for the same office now vacant at Leeds. Mr. Harris is well known as a scientific and hard-working sanitarian in the north, and has the satisfaction of knowing that many suggestions of his as to the health of Sunderland, have been carried out during his office, to the immense improvement of the health of the town. I regret to hear that Mr. Mordey Douglas, a well known surgeon in Sunderland, has returned from a sojourn at the Canaries in very indifferent health.

Alnwick.

In reference to the high death-rate prevalent at Alnwick the Local Board have consulted Sir Robert Rawlinson, who is well acquainted with the town and its sewerage system. He makes some valuable suggestions to the board, but tells them very plainly that ventilation will not very much improve bad houses, and that to his knowledge there are many of this sort in Alnwick, some towards the Castle entrance—dens, frequently used by vagrants and tramps. "Mend these," he says, "by new labourers' dwellings."

Darlington.

There was a strange scare in Darlington last week, so prevalent that the Mayor in Council found it necessary to allude to and contradict it. It was reported that the town crier had gone round with his bell warning the people not to eat any vegetables. Several loads of vegetables were unsold in the market owing to this scare. The Mayor very properly said that there was more danger to health in abstaining from fresh and clean washed vegetables than from their use.

Whitby.

Much sympathy is felt with Dr. E. P. Mead, an old and respected practitioner in Whitby, who has had the misfortune to lose his son under very sad circumstances. Mr. Mead was one of the chief officers of a Newcastle steamer, and while on an outward voyage in mid ocean was seized with rheumatic fever, and during the temporary absence of his attendant he got out of bed, went on deck, and leaped into the sea. Mr. Mead was not seen again.

Morpeth.

On the invitation of Dr. M'Dowall, the resident medical officer of the Northumberland County Lunatic Asylum, a

large muster of northern practitioners took place in the grounds of the asylum last Tuesday. Dr. McDowall invited no less than 240 guests, and spared no pains to entertain and instruct all who attended.

Newcastle-on-Tyne, Aug. 7th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

EDINBURGH.

University Graduation Ceremonial.

THE annual medical graduation ceremonial took place on Aug. 1st in the United Presbyterian Synod Hall. Sir William Muir, principal and vice-chancellor of the University, presided, and was accompanied by most of the members of the Senatus Academicus. Only one honorary graduate was made this year—the Rev. Archibald Henry Sayce, M.A., of Oxford,—on whom the degree of Doctor of Divinity was conferred. The candidates accepted for the degree of Doctor of Medicine—fifty-nine in number—appear to have sent in exceptionally able theses, as no fewer than eight gained gold medals; seven others were deemed worthy of competing for the dissertation gold medals, and twenty others received commendation. At the same time the degree of M.B. and C.M. was conferred on 164 candidates, of whom eleven had passed the necessary examinations with first class honours, and eight had passed with second class honours. These honour lists are larger than usual, as, however, is the list as a whole. After the numerous prizes had been awarded, Professor Crum Brown addressed the budding practitioners, and gave them some good, sound practical advice. He was exceedingly well received by the graduates, whom he welcomed amongst the members of the university of a higher grade. He pointed out that all the changes through which they had passed were not so much in medicine as in themselves. Ways of thought at one time untrodden had been converted into intellectual highways; and forms of thought at one time unfamiliar had now become habitual. Advising them on many points, he drew special attention to the fact that no one so much as a doctor needed to have the *mentem sanam in corpore sano*, and no one ought to know better how to keep both body and mind in good order. He referred, however, not to pampering, but to neglect. They knew that it was best that they should have their meals at approximately regular intervals, and that they should sleep in bed at night for a time varying with different persons from six to eight hours. Medical men could not always secure that—the door bell and the dinner bell often ringing at the same time. They might be called in the middle of the night, and they must go. They must accustom themselves to get their meals and their sleep when they could. They might do much—they ought to do what was possible by arrangement and forethought to keep the unavoidable irregularity within reasonable limits. If the worst came to the worst they could take a sandwich in their pocket and sleep in a patient's house. By the neglect of such precautions many valuable lives had been cut short, and it was the best men who were most likely to forget themselves; they did not notice or think of their own health until it was too late. He further remarked that a man was unfit to practise their profession if he was not in the true sense a gentleman, and his professional training, even the post-practical and technical parts of it, tended to make him one. Some of them might call to mind very skilful and successful physicians whose manners were not exactly what they would have liked. They must take care in such cases not to judge of their neighbours from a purely society point of view. At the same time, he might remind them that they themselves should conform in all lawful matters to the usages of polite society. Their education, they must remember, had not yet come to an end; it must be continued as long as they lived, but it would henceforth be carried on under new conditions. They would now be directly and individually responsible for what they did. They would often have to make up their minds without help and without appeal. Their teachers and their examiners that day declared that, in their opinion, they as graduates were fit to undertake the solemn duty of relieving suffering humanity. He urged them not to set about their work with a light heart, but to remember that a very precious thing had been entrusted to their care.

The 2nd Division of the Volunteer Medical Staff Corps.

On Friday, Aug. 2nd, fifty all told of the 2nd Division V.M.S.C., under Surgeon Hepburn, left the Waverley station for London *en route* for Aldershot, where they are now encamped for a week's training along with the other divisions of the Volunteer Medical Staff Corps. The men were apparently highly delighted at the prospect of another camp sojourn, and everyone was in the best of spirits. Should the weather be at all favourable there can be little doubt that an enjoyable and profitable time will be spent. A number of admiring friends went down to the station to see the division set out.

Edinburgh, Aug. 6th.

GLASGOW.

Public Health.

For the fortnight ending July 27th there were 427 deaths registered, a death-rate of 21 per 1000 living, as against 24 in the previous fortnight. The epidemic of whooping-cough and measles is falling off, the combined death-rate from these two diseases being 1·8 per 1000 in place of 2·6. In both affections the mortality is the lowest since the first fortnight in January. Already 583 deaths from measles have been registered this year, which will be distinguished as the year of the severest epidemic of measles since 1871.

University Graduation Ceremony.

At the recent graduation ceremony Professor George Buchanan delivered an address which has given rise to not a little discussion and newspaper controversy. His first topic, the overcrowded state of the profession, must have been profoundly interesting to the ninety-one graduates who listened to him. He had very little comfort to give, however, save what could be expected from the statement that we have the same cry of overcrowding from all professions and businesses at present. He quoted statistics to show that the number of medical men a district will support was not to be measured by population alone. In Glasgow, in 1850, we had 255,000 people in the postal area, with 231 medical practitioners; at the present date we have 750,000 in the same area, with only 375 practitioners; and yet there is no place from which more complaints come as to superabundance of medical men. In discussing the needs of the University he deprecated the foundation of any more bursaries, but said that the great want was a larger number of fellowships, teaching fellowships, of from £150 to £200 a year. He discussed also the Universities Bill, the subjects of examinations and teaching, advocating a system of less lecturing and a freer use of text-books.

Medical Statistics.

Professor Buchanan's favourite anomaly, that we should have the feeling of professional overcrowding in Glasgow, when we have relatively far fewer medical practitioners than we had forty years ago, becomes less puzzling in the light of some statistics which have been published in connexion with the newspaper correspondence to which Dr. Buchanan's speech gave rise. It seems that there are 40 medical institutions connected with the city, including 2 large infirmaries and a third in course of erection, 3 parochial hospitals, 4 asylums, 3 fever hospitals, 9 special hospitals, 6 convalescent homes, 2 homes for incurables, 2 nursing institutions, 4 general dispensaries, and 5 special dispensaries. There are also out-door departments connected with all the large infirmaries, 2 of the parochial hospitals, 8 of the special hospitals, and 1 of the nursing institutions. Only one of these institutions, the Royal Infirmary, was in existence before the end of last century, 6 were established in the first half of the present century, 9 were started between 1850 and 1870, and 21 have arisen since the latter year. The number of medical officers attached to these 40 institutions amounts to 258; 125 of these are paid, 45 are resident. Some medical officers hold more than one appointment; 36 men connected with 4 of the principal institutions hold 82 appointments. In the 40 institutions we have 5171 beds; average number occupied, 3519. If the population of Glasgow (including "Greater" Glasgow) be taken as 750,000, we have one bed for every 145 people. The number of in-door patients during the past year in these 40 establishments was 31,603, equal to 1 in 23 of the population; out-door patients, 97,144, or 1 in every 8 people; total, 128,747, or 1 in rather less than every 6 of the population. These refer to separate patients; the number of consultations or attendances reaches 350,950.

There are upwards of 370 medical practitioners in Glasgow and neighbourhood. With regard to medical students, there were 784 enrolled last year at the University; 53 enrolled in medicine and arts; total, 837. During the same period there were 119 at Anderson's College Medical School, and about a similar number at the Royal Infirmary School. This gives a total of over 1000 students at our medical schools.

Glasgow, Aug. 6th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

DUBLIN.

Royal University of Ireland.

THE number of candidates who entered for the several examinations, which were concluded July 23rd, amounted to 1867, but the actual number who presented themselves for examination was 1751. Of these, 29 retired before the close of the examination, 644 were rejected, and 1078 passed, the number of passes being a little over 61 per cent., and of rejections a trifle over 36 per cent. The receipts of the University for the year ending March 31st last, including last year's balance of £10,691, amounted to £33,891, and the expenditure to £24,976. The general expenditure for examinations amounted to £11,854, as against £11,819 for the preceding year. During the year the sum of £1326 was spent on the equipment of the laboratories. J. Johnstone Shaw and Edward Cuming have been elected representatives on the Senate, in place of the Rev. Dr. Porter, deceased, and of Mr. Shaw, whose term of office had expired. There were three candidates for the two vacancies.

Royal Barracks, Dublin.

Although the number of typhoid fever cases which occurred in these barracks was considerable, yet the deaths were comparatively few, being not more than six. The Royal Lancaster Regiment, which recently occupied the barracks, will encamp under canvas during August and September in the Phœnix Park, and the Palatine-square and the Richmond Barracks will during that time undergo a thorough overhauling. The Royal Square (the most insanitary portion of the Royal Barracks) will be used as ordnance stores), and when the new cavalry barracks are finished the cavalry square will be occupied by the Army Service Corps. Only one battalion of infantry will in the future be quartered in the Royal Barracks, and that will be in the Palatine-square, the battalion which occupied the Royal Square being located in the Wellington Barracks.

Queen's College, Galway.

As an explanation of the comparatively small number of students who attended this college for the past session, it is well to bear in mind that the institution is situated in the poorest and most backward part of Ireland, at a distance from other centres of education. It follows from this that its function is to awaken and foster a desire for higher education, rather than to supply a pressing demand, and it is gratifying to learn that the college can justly claim to have given an impulse to educational progress, and to have conferred substantial benefits on the youth of a remote province. During the session 1888-89 there were 107 students on the books of the college, of whom forty-two were in the Faculty of Medicine. The rapid development of medical science, especially in the department of biology, has called for an enlargement and improvement of scientific apparatus, so as to keep pace with the progress of discovery. The department of physiology affords a remarkable instance of the method of teaching the natural sciences that has been introduced in recent years. Until recently instruction in physiology consisted in a course of lectures illustrated by experiments performed by the lecturers and by histological specimens shown to the students. Now, however, in addition to attendance on lectures, the student must himself make the various analyses, preparations, and experiments that were previously only shown to him. Important additions have been made to the museum of natural history, which may now be said to be in a state of perfect efficiency for teaching purposes, while the chemical laboratory also affords ample accommodation for students.

Health of Dublin for June Quarter.

The births numbered 2540, and the deaths 2082, the latter being equal to 23·6 per 1000 as compared with 28·7, the average for the second quarter of the past ten years. Zymotic diseases caused only 202 deaths, being 136 under the average number for the June quarter of the last ten years. Measles caused 37 deaths, scarlatina 5, typhus 5, whooping-cough 30, and erysipelas 2. No death from small-pox has been registered in the Dublin Registration District since the week ending March 3rd, 1888, and in hospital there has not been a case of the disease since July of last year.

Mr. Thomas Collins has been re-elected a representative on the General Medical Council for the Apothecaries' Hall for the ensuing year.

Mr. P. J. Finegan has been elected medical officer to Carlingford Dispensary, Dundalk Union.

Dublin, Aug. 6th.

BELFAST.

Fatal Sewer Accident in Belfast.

On June 29th four *employés* of the Belfast Town Council descended one of the main sewers for the purpose of having it cleaned, when they were partially suffocated, and were with difficulty rescued and taken to the Royal Hospital. One died soon after admission, apparently as much from submersion as from sewer gas; a second died in a day from acute pneumonia; the other two recovered. A very full inquiry was made into the circumstances, and Dr. Letts, Professor of Chemistry in Queen's College, Belfast, who was retained by the Town Council to investigate the matter, has just presented his report, which is very thorough and exhaustive. Dr. Letts' conclusions are: 1. The air ordinarily in the sewer, even with closed ventilators, was never bad enough to cause any sudden accident. 2. When the man-holes are opened the sewer is rapidly and thoroughly ventilated. 3. On the day of the accident ample time was given for proper ventilation. 4. The accident was primarily caused by a sudden outburst of foul gas through a disused privy-pipe opening into the top of the sewer at a distance of six feet from the place where the accident occurred. In investigating the matter, Dr. Letts had the sewer opened from the outside. A short distance beyond where the accident occurred a brick structure was encountered on the roof of the sewer. When this was opened a curious smell was at once detected of a tarry odour, and on Dr. Letts applying a light, a pale blue flame shot out and then retreated downwards, burning for perhaps a minute. This air contained a great deal of marsh gas. Further excavation showed that a nine-inch earthenware pipe branched off from the brick shaft, which had a circular hole in the bottom opening into the sewer. In this earthenware pipe was a quantity of mud, apparently old soil from a closet or privy. The upper end of the earthenware pipe was found plugged. Letheby's experiments have shown that London sewage, when shut in a vessel not exposed to the air, gives off gas rapidly. He found this consisted of marsh gas, CO_2, N, and H_2S. Dr. Letts believes the gas he found was similar, but had more CO_2. Dr. Letts thinks the tube containing the soil, which was disengaging the gas, may have got choked for a time, and consequently a considerable volume of gas may have been imprisoned beyond the obstruction. After a time, in the hot June weather, this would cause so much pressure as to force the obstruction and to issue in a gust into the sewer. The two men in the sewer, in the neighbourhood of the pipe, are prostrated from the effects of the gas; they fall in the water; a panic arises as the men recover from the effects of the gas; some endeavour to pass one way, some another, to escape, and there can be little doubt that the men who are dead lost their lives not through gas poisoning, but by submersion in the sewage matter and its subsequent effect on the lungs. 5. The noxious constituent of the gas was probably CO_2, which prostrated the men in the sewage water. 6. All the men seriously affected or killed by the accident either swallowed sewage matter or it got into their lungs. 7. It is probable that none of the men would have been injured but for the dips in the sewers and the consequent accummulation of sewage water. As a result of his very careful examination, Professor Letts recommends for the prevention of accidents in the future: 1. A reconstruction of that part of the sewer where the accident occurred. 2. The sewers should not be cleaned except in dry weather, nor should men be sent into them then. 3. Before cleaning any sewer two men at least should walk the whole distance, each provided with a lamp, and then return and report to the ganger. 4. When cleaning a sewer the men should have two lamps alight

with them. 5. The men should be directed to search for openings in the sewers, and to report immediately if any sewer is in a bad condition, either as regards depth of water, foulness of air, or defects in brickwork.

Queen's College, Belfast: The President's Report.

From the report of the President (Dr. Hamilton), just printed, I learn that the total number of students attending the College during the session 1888–89 was: in arts, 174; in medicine, 222; in law, 22; in engineering, 11. As seven students attended in more than one faculty, the entire number in attendance was 422. The average number of students in attendance during each session of the first ten years of the history of the College was 189·1; during each session of the second decade, 368·2; in the third, 400·3; in the fourth decade now ended it is found to have risen to 473·4. During the forty years of its existence, 4681 students altogether have entered the College. At the examinations of the Royal University, held during the last academic year, 393 students of the Belfast College passed in the various grades. Of these 20 passed the first University examination in medicine, 30 the second, 47 the third, and 30 medical degrees were obtained. After giving details of the successes of Queen's College students at other universities, a special tribute is paid to the memory of Dr. Porter, the late President, whose death in March last was such a serious blow to the cause of education in the north of Ireland. The report concludes by calling attention to the great want of an additional grant of money for providing increased accommodation in the chemical and biological laboratories. The required sum would be about £8000.

Presentation of a Park to Belfast.

On Aug. 1st a letter was read at the monthly meeting of the Town Council from Mr. R. G. Dunville, D.L., offering to present to the city, free, a piece of ground containing five or six acres of land, worth, it is said, £7000, for a public park. The ground is situated in a district which is rapidly increasing in population. A hearty vote of thanks was passed to Mr. Dunville for his generous gift.

Hospital Saturday.

Notwithstanding that Hospital Saturday (Aug. 3rd) was anything but a favourable day, the morning being very wet, a larger sum was realised than in either of the two previous years. The total amount raised was about £300. This includes, however, £38 contributed by the members of the Queen's College Musical Society, as the result of an afternoon performance of "Maritana," given by them in the Theatre Royal on Saturday in aid of the funds of the hospital.

Hydrophobia.

On March 14th a man, while walking along College-square, one of the leading thoroughfares of Belfast, was bitten by a dog snapping at his hand. The wound, which was at the root of the thumb, healed in ten days, and nothing further developed until July 28th, when he was taken ill, and Dr. N. J. McDonnell pronounced the disease to be hydrophobia. He was brought to the Royal Hospital the next day (July 29th), when it was noticed that he had difficulty in swallowing fluids, convulsive attacks, and pain and loss of power in the right arm. On the third day after admission he became delirious and violent, and this continued until 2 A.M. on Friday, Aug. 2nd, when he died. Pneumonia set in previously to death. After hearing the medical evidence at the inquest, the jury returned a verdict that he died from hydrophobia.

Belfast, Aug. 6th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Cases of Poisoning at Hyères and Havre.

PROFESSOR BROUARDEL read his report at the Academy of Medicine, giving the result of his investigations on the cases of the wholesale poisoning that took place a few months ago at Hyères and at Havre. He observed that between the most acute forms of poisoning, those in which death takes place in a few hours and those which determine accidents the evolution of which is accomplished in some weeks and even months, there is a great analogy with the cases of poisoning at Hyères, where, it will be remembered, the medical men at first supposed that it was an epidemic of enteric fever, then they thought it was an epidemic of influenza, finally an epidemic recalling acrodynia, but when symptoms of paralysis showed themselves, all hypotheses disappeared, and the truth was discovered. According to Dr. Brouardel there are four distinct periods in arsenical poisoning: the first is marked by digestive troubles, the second presents eruptions and a laryngo-bronchial catarrh, the third is characterised by sensory troubles, and the fourth period by paralysis; but until this becomes manifest, one may be led to believe that he has to do with some gastric disorder, influenza, or with acrodynia. But the most remarkable part of Dr. Brouardel's communication was the discovery of arsenic in the osseous tissue, while there was no trace of this substance in the viscera where it is habitually found. M. Pouchet, who took up the chemical part of the researches with Dr. Brouardel, observed that arsenic may be found not only in the principal viscera, the skin, and the hair, but also in the bones, and principally in the spongy tissue, where it is to be found even when no trace is left in the viscera. Dr. Brouardel then indicated the means by which poisoning by arsenic may be discovered. He said that the linen which may be soiled by the dejections should be secured; the urine, which should be drawn off by the medical man himself, should be analysed; and search should be made in the hair for arsenic.

Heredity of Myopia.

Dr. Motais of Angers read a note on the Heredity of Myopia. The author had examined the families of 330 young myopic subjects, and arrived at the following conclusions: 1. The hereditary influence of myopia is manifest. 2. It exists in 216 out of 330 families. 3. Hereditary myopia is characterised by its early appearance, its comparatively rapid development, and the high average of its degree. 4. Myopia is transmitted by the father to the daughter 86 times out of 100, and by the mother to the son 79 times out of 100. Heredity is crossed.

Spectacles and Eye-glasses.

Dr. G. J. Bull, M.D., of the Faculty of McGill's University (Montreal), has lately taken his degree in Paris, and chose for the subject of his inaugural thesis, "Spectacles and Eye-glasses." After having practised about twenty years in America, the greater part of which time Dr. Bull practised ophthalmology in New York, he came over to Paris, and perfected himself in this branch under the guidance of Dr. Javal, the celebrated ophthalmologist, with whom he worked at the laboratory of the Sorbonne. Those who wish to learn how to wear spectacles and eye-glasses should read Dr. Bull's newly published work, which is the reproduction of his thesis, containing, in addition, an introduction by Dr. Javal. The work is most interesting, and of great theoretical and practical value, particularly to those affected with astigmatism. According to the author, for some years a more precise knowledge of astigmatism has produced a complete revolution in the science of ophthalmology. He says it is important to draw the attention of the public to the existence of this optical defect, which is more frequent than myopia and than presbyopia, and which is corrected by means of special glasses, cut to measure, after the indications of the oculist. As regards myopia, Dr. Bull states that infants are not born myopes; with very rare exception they become so with age, and more frequently because they acquire the habit of reading and writing at too short a distance. The eye, therefore, becomes developed in a defective manner. It is often said that myopia and presbyopia are two affections opposed and incompatible; but the author affirms that this is not the case, the real state opposed to myopia being hypermetropia. Dr. Bull is the inventor of a new optometer, a full description of which will be found in his work, where other useful hints are given for the preservation of the eyesight.

Tuberculosis.

The second Congress for the Study of Tuberculosis will be held at the end of the month of July, 1890, under the presidency of Professor Villemin, when the following questions will be submitted for discussion: — 1. The identity of tuberculosis in man and that of the bovines, gallinaceæ, and other animals. 2. The bacterian and morbid associations of tuberculosis. 3. The hospitalisation of tuberculous subjects. 4. Agents capable of destroying the bacillus of Koch, non-injurious to the organism, as regards the prophylaxy and the therapeutics of human and

animal tuberculosis. Intimation of intention to be present and subscriptions (20 francs) should be forwarded to M. G. Masson, Treasurer, 120, Boulevard Saint Germain, and that communications which concern papers should be addressed to Dr. L. H. Petit, General Secretary, 11, Rue Monge, Paris.

Death of M. Armand Hayem.

A case of suicide, under most painful circumstances, occurred on Saturday last, in the person of M. Armand Hayem, brother of our esteemed *confrère* Professor Hayem. The deceased gentleman had only recently been elected a member of the Academy of Sciences. He had been for some time labouring under great mental depression, which was accompanied by symptoms of dyspepsia, for which he was treated by some of the leading members of the faculty. He, however, fell into a melancholic condition, and being, as he said, afraid of dying of inanition, he put an end to his life by shooting himself, the bullet passing through his right temple.

Dr. Sydney Ringer of London has been elected Corresponding Member of the Academy of Medicine.

Paris, Aug. 6th.

THE SERVICES.

ARMY MEDICAL STAFF.—The Commission of Honorary Brigade Surgeon Benjamin Lane as Assistant Surgeon is antedated to May 8th, 1852, such antedate not to carry back pay or allowances prior to June 5th, 1882; Sergeant-Major David James Gillman, Medical Staff Corps, to be Quartermaster, with the honorary rank of Lieutenant, vice Honorary Lieutenant W. Murray, retired (dated Aug. 7th, 1889).

VOLUNTEER CORPS.—*Artillery:* 3rd Volunteer (Kent) Brigade, Cinque Ports Division, Royal Artillery: The undermentioned Acting Surgeons to be Surgeons: C. Arrol (dated Aug. 3rd, 1889); R. J. Bryden (dated Aug. 3rd, 1889). 1st Midlothian: Surgeon P. A. Young, M.D., to be Surgeon-Major, ranking as Major (dated Aug. 3rd, 1889).—*Rifle:* 2nd Volunteer Battalion, the Queen's Own (Royal West Kent Regiment): Acting Surgeon D. T. Playfair to be Surgeon (dated Aug. 3rd, 1889).—2nd Volunteer Battalion, the Prince of Wales's (North Staffordshire Regiment): Surgeon W. G. Lowe, M.D., to be Surgeon-Major, ranking as Major (dated Aug. 3rd, 1889).

Obituary.

CHARLES SAMUEL WEBBER, F.R.C.S.

AMONGST the many men in our profession full of quiet and unobtrusive goodness and kindness, few, if any, have possessed these qualities in a higher degree than did Charles Samuel Webber, who died on the 20th ult. Of late years, owing to a very painful affection, he had been compelled to retire absolutely into private life, and he was therefore known but little to the medical men of the present day; but those who did know and see him found him, in the midst of his sufferings, always full of patience and kindness, desirous to work for others as far as his strength allowed, and always intelligently interested in all that concerned his profession. He was born at Hopton, Suffolk, on Aug. 7th, 1809, and was the only son of Samuel Webber, surgeon, of that place, who was Colonel Commandant of the Blackwater Regiment of Volunteers, and deceased in 1822. Mr. Webber entered at Guy's and St. Thomas's Hospitals and subsequently studied in Paris. He joined the Society of Apothecaries as long ago as 1831, and became M.R.C.S. in 1836, and a Fellow of the College in 1864. In the earlier part of his career he assisted Mr. Samuel Randall of Orford, Suffolk, but subsequently obtained an appointment, then much sought after—namely, that of Surgeon-Superintendent under H.M. Colonial Lands and Emigration Commission. It is almost needless to say that he was a great favourite and very popular with the emigrants; and that he well utilised his time is proved by the fact that the results of his experience were published under the title of "A Journal of a Surgeon Superintendent" by the Commissioners. He had previously published in THE LANCET an interesting and instructive "Case of Strangulated Hernia successfully treated by the Exhausting Syringe attached to an O'Beirne's Rectal Tube." He was a member, and formerly Vice-President, of the Harveian Society.

In 1849 Mr. Webber married Elizabeth, daughter of Mr. M. J. Raynes, of Norwich, and he at that time resided in Connaught-square. Some years afterwards he took into partnership Dr. John Easton, and, in doing so, the scrupulous and punctilious honour and truthfulness which pervaded his character were conspicuously shown, for in the negotiations which took place he was especially careful to under-state and to under-estimate the value of his practice rather than to exaggerate its worth; and, as a matter of fact, the result of the first year's partnership proved that the assets were very notably beyond the amount at which Mr. Webber had stated them. Thus he partially retired from practice, and after a while felt obliged, owing to the state of his health, to altogether relinquish it; and he subsequently changed his residence to 23, Abbey-road, N.W., where he died. His long malady, dating so far back as almost twenty years, was a very peculiar one, and greatly exercised the diagnostic skill of many of his medical brethren. His friend and neighbour, Dr. Richard Neale, with his son, Dr. William Henry Neale, were always ready to assist him in any and every difficulty, and he was not unfrequently seen by Dr. Hare, who alike valued the friendship of the patient and felt a deep interest in the case. He suffered from severe pain, which always appeared to have its centre at the left nipple line, about two inches below the costal cartilages, and from thence it seemed to pervade almost the whole of the left upper abdomen. The pains were almost always worst in the forenoon, and gradually got better after the bowels had been relieved, so that he was comparatively easy in the latter part of the day; but the regulation of his bowels was a matter of great difficulty, and he was obliged almost always to have recourse to enemata. Though he was a very uncomplaining man and possessed of much endurance, the pain—always more or less of the same character and in about the same position—was so severe that he was obliged to have recourse to opium and ultimately took very considerable doses of it. But this great remedy made his life endurable and at times comparatively comfortable, so that he was able in the latter part of most days to occupy himself in some useful (often charitable) work; and it without doubt prolonged his life by some years. The most rational diagnosis, and that which best covered and explained his many symptoms, was that he had some constriction—possibly from a former ulcer, but certainly non-malignant—of the large intestine some distance above the sigmoid flexure, and one very able medical man even advised that colotomy should be performed. Repeated and very careful examinations of the abdomen always failed to find any mass or tumour or, indeed, anything abnormal in the region of the pain, so that the physical signs were of an absolutely negative character. A post-mortem examination of the abdomen was made, and the writer is assured that nothing whatever was found in the intestines or elsewhere to explain physically those many years of terrible suffering.

But though Mr. Webber was compelled by his health to retire early from practice, he by no mean retired, so long as moderate strength remained to him, from work. He especially devoted himself to that remarkable medical charity, the British Medical Benevolent Fund, which, doing an immense amount of good, is conducted with such a minimum of expense that it may be considered in this respect a model to all the charities of the country. It ought to receive the support of every medical man in the country who can afford to give anything to charities; and it ought also to be supported by many outside the profession, as some mark of their gratitude towards those who, devoting themselves to the welfare of others, are often so ill-remunerated that they cannot lay up in store for their families or even for themselves if they attain old age. Mr. Webber was Honorary Financial Secretary to the Fund for several years up to 1877. The offices are entirely honorary, and it had been found that attention to the cases and to the money management of the Fund involved such an immense amount of work and time that no medical man ought to be asked to take the whole on his shoulders. The work was therefore divided, and Mr. Webber undertook the duties of "Financial Secretary." By his business habits, his thought and his hard work (notwithstanding that this was often done in the midst of much pain), it is not too much to say that he revolutionised, and yet wonderfully simplified, the mode of

keeping the accounts of the Fund, and so perfect was the plan which he inaugurated that it has been continued by his successors, with scarcely an alteration, down to this day. And so his influence in this and in many other ways remains, while he has passed away—loved, honoured, and regretted. "He being dead yet speaketh."—C. J. H.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having passed the necessary examinations, were at the ordinary meeting of the Council on the 1st inst. admitted Members of the College:—

*Aaron, David Jacob, L.R.C.P.Lond., King's College Hospital.
Aylward, Walter Charles, L.R.C.P.Lond., 76, Fore-street, Ipswich.
Barber, Sidney Frederick, L.R.C.P.Lond., Sheffield.
Barkworth, Henry Smith, L.R.C.P.Lond., Balham.
*Basu, Báman Dás, L.S.A., Trinity-square, S.E.
Beauchamp, Sydney, L.R.C.P.Lond., Battersea.
Bennett, Christopher H. Wentworth, L.R.C.P.Lond., Nantwich.
Bennett, Colin Edward Wilmot, L.R.C.P.Lond., Plymouth.
Berryman, Henry A., L.R.C.P.Lond., Fairholme-rd., West Kensington.
*Best, William Jenner, L.S.A., Louth.
Bishop, Reginald W. Snowden, L.R.C.P.Lond., Porchester-gardens, W.
Bokenham, Thomas Jessopp, L.R.C.P.Lond., Cheshunt.
*Bowlby, George Herbert, L.R.C.P.Lond., Torrington-square.
Bowman, Henry Moore, L.R.C.P.Lond., New Southgate.
Brown, David L.R.C.P.Lond., Stoke Newington.
Carpenter, Edgar Godfrey, L.R.C.P.Lond., Chiswick.
Challis, Henry Thornton, L.R.C.P.Lond., Hackney.
Charles, William Henry, L.R.C.P.Lond., Merthyr Tydvil.
*Clarke, John Kempe, L.R.C.P.Lond., Cardiff.
Clarke, John Tertius, L.R.C.P.Lond., Richmond-terrace, S.W.
*Clarke, Thomas Henry, L.S.A., Poplar.
Clemson, Thomas Fletcher, L.R.C.P.Lond., Botton-le-Moors.
Colyer, James Frank, L.R.C.P.Lond., Dulwich.
*Cooper-Pattin, William Harry, L.R.C.P.Lond., Cambridge.
*Coryn, Herbert Alfred William, L.S.A., Brixton.
Creswell, John Edwards, L.R.C.P.Lond., Douro-place, W.
*Crompton, Ernest, L.R.C.P.Lond., Exeter.
Crook, Arthur, L.R.C.P.Lond., Arbour-square, E.
Crosse, Reginald Edward, L.R.C.P.Lond., Norwich.
Crump, Thomas Greenwood, L.R.C.P.Lond., Kidderminster.
Curwen, Eliot, L.R.C.P.Lond., Hampstead.
Dallas, Stuart Alex. Charles, L.R.C.P.Lond., St. James-street, W.C.
Daniel, Herbert, L.R.C.P.Lond., Wymondham.
*Dawson, Ernest, L.R.C.P.Lond., Hampstead.
De Jersey, Walter Brock, L.R.C.P.Lond., Lambeth Palace-road, S.E.
*Dennison, Tom Stephenson, L.R.C.P.Lond., Hull.
Dodwell, Philip Rashleigh, L.R.C.P.Lond., Stanhope-street.
Eaves, Wilberforce Vaughan, L.R.C.P.Lond., Hornsey.
Farington, John, L.R.C.P.Lond., Manchester.
*Farquharson, George Sinclair, L.S.A., Canonbury.
Fazan, Charles Herbert, L.R.C.P.Lond., St. Helen's-gardens, W.
Fitz-Gerald, Edward Desmond, L.R.C.P.Lond.
Folker, Herbert Henry, L.R.C.P.Lond., Hanley.
Forward, Francis Edward, L.R.C.P.Lond., Chard.
Foster, Alfred, L.R.C.P.Lond., Delamere-street, W.
Frossard, Emilien Edward, L.R.C.P.Lond., St. John's, S.E.
*Gilchrist, Alexander William, Middlesex Hospital.
Gravely, Ronald Thomas, L.R.C.P.Lond., Cowfold, Sussex.
Griffith, John, L.R.C.P.Lond., Acton.
Habbijam, Ernest Thomas, L.R.C.P.Lond., Uxbridge-road, W.
*Hale, Edward, L.R.C.P.Lond., Liverpool.
Hall, Walter, L.R.C.P.Lond., Southampton.
Hamilton, Henry, L.R.C.P.Lond., Church End, Finchley.
*Harrison, James Herbert Hugh, L.R.C.P.Lond., Univ. Coll. Hospital.
Haslett, William John, L.R.C.P.Lond., Donegal
*Heberden, William Stanley, L.R.C.P.Lond., Weybridge.
Henniker, John Granville, L.R.C.P.Lond., Albert-gate Mansion.
Hicks, Edward James, L.R.C.P.Lond., Amhurst-road, N.E.
Hill, Leonard Erskine, L.R.C.P.Lond., Hampstead.
Hinds, Thomas Walter, L.R.C.P.Lond., Goudhurst.
Hitchon, Henry Hardacre Irving, L.R.C.P.Lond., Heywood.
*Holman, Henry James, L.R.C.P.Lond., North Dulwich.
*Holmes, James Willie, L.R.C.P.Lond., Sheffield.
Horden, Herbert Henry, L.R.C.P.Lond., University College Hospital.
Hore, Ernest Wickham, L.R.C.P.Lond., University College Hospital.
*Howse, Arthur Edward, L.S.A., Kingswood-rd., Clapham-park.
*Hunt, Arthur Henry Wm., L.R.C.P.Lond., Westminster Hospital.
Hutchinson, Roger Jackson, L.R.C.P.Lond., Cavendish-square, W.
Jackson, Basil Fred. F., L.R.C.P.Lond., Cornwall-road, Brixton.
Jacobsen, Geo. Oscar, L.R.C.P.Lond., Gordon-street, W.C.
*Jessop, John William, L.R.C.P.Lond., Crediton.
Johnson, Henry Percival, L.R.C.P.Lond., Sloane-street.
Johnstone, John Lloyd, L.R.C.P.Lond., Orreh, Wigan.
Jones, Arthur Wentworth, L.R.C.P.Lond., Bicester.
Jordan, Henry Martyn, L.R.C.P.Lond., Trinity-square, S.E.
Kent, Chas. Arthur, L.R.C.P.Lond., Craven-hill-gardens, W.
*Kent, Robert Thomas, L.R.C.P.Lond., Mornington-crescent, N.W.
Kerr, Geo. Douglas, L.R.C.P.Lond., Weeck-road, West Hampstead.
Lambert, Thomas Wilson, L.R.C.P.Lond., Lambeth-palace-road.
Lange, André Philip, L.R.C.P.Lond., Claverton-street, S.W.
Lea, Arnold Wm. Warrington, L.R.C.P.Lond., Sandbach.
Lemon, Edward Henry, L.R.C.P.Lond., Anerley.
*Light, Edwin Mellor, L.R.C.P.Lond., Lambeth-palace-road.
Lloyd, John Wesley, L.R.C.P.Lond., Liverpool.
Lodwidge, William Charrott, L.R.C.P.Lond., Basingstoke.

* Candidates who have not presented themselves under the regulations of the Examining Board.

Long, Edward Chas., L.R.C.P.Lond., Dewetsdorp, Orange Free State.
Mack, Cyril Gordon, L.R.C.P.Lond., St. Paul's-road, Canonbury.
*Masser, Edward Charles, L.S.A., Oakengates.
Morgan, Samuel Wolfastan, L.R.C.P.Lond., Clifton.
Munday, Richard Cleveland, L.R.C.P.Lond., Plymouth.
*Murray, George, L.R.C.P.Lond., Green-street, W.
Oakeshott, Walter Field, L.R.C.P.Lond., Highgate.
Offord, James Albert, L.R.C.P.Lond., Norwich.
Oldham, George Frederick, L.R.C.P.Lond., Dalston.
*Osborne, Frank, L.S.A., Bath.
Osburn, Harold Burgess, L.R.C.P.Lond., Clapham.
Parham, Hetman Charles Harris, L.R.C.P.Lond., Streatham.
Paton, Edward Percy, L.R.C.P.Lond., Highbury Quadrant, N.
Pearce, Frederick William, L.R.C.P.Lond., Canonbury.
*Plummer, Richard Henry, M.D. California, Gower-street, W.C.
*Ramsden, Herbert, L.R.C.P.Lond., Saddleworth.
Robinson, Edward Herbert, L.R.C.P.Lond., Salford.
*Russell, William Alfred, L.R.C.P.Lond., Aldersgate-street, E.C.
Saul, Victor Salmon, L.R.C.P.Lond., Hampstead.
*Scott, Sack Noy, L.R.C.P.Lond., St. Austell.
*Seccombe, Samuel Hubert, L.S.A., Whitechapel-road, E.
Sellers, Arthur Edward, L.R.C.P.Lond., Dalton, Huddersfield.
*Shadwell, Henry Eugene, L.R.C.P.Edin., Putney.
Sharpin, Archdale Lloyd, L.R.C.P.Lond., Bedford.
Smith, Richard Arthur, L.R.C.P.Lond., South Hampstead.
Spratly, Ernest Richard Woody, L.R.C.P.Lond., Rock Ferry.
Stocken, Leslie Maury, L.R.C.P.Lond., Ealing.
Stocker, Walter W., L.R.C.P.Lond., St. James's-square, Notting-hill.
Swallow, Allan James, L.R.C.P.Lond., Clapham-road.
Swift, Sidney Sampson, L.R.C.P.Lond., Liverpool.
Sykes, John Herbert, L.R.C.P.Lond., Southport.
*Talent, John William, M.B.Edin., Dist. Infirm., Ashton-under-Lyne.
Tibbles, William, L.R.C.P.Edin., Radford-road, Nottingham.
*Verano, Louis Lawrence, L.S.A., Torrington-square.
Vise, Arthur Blithe, L.R.C.P.Lond., Holbeach.
*Wakeham, Charles Henry, L.R.C.P.Lond., Hackney.
Walker, George, L.R.C.P.Lond., Lordship-lane, S.E.
Wallace, Richard Teale, L.R.C.P.Lond., Stamford-hill.
*Ware, Ernest Edwin, L.R.C.P.Lond., Lambeth-palace-road.
Wickham, Gilbert Henry, L.R.C.P.Lond., Lambeth-palace-road.
Wilkinson, James Howard, L.R.C.P.Lond., Dudley.
*Winn, Thomas Cromwell, L.S.A., Well-street, South Hackney.
Worboys, Thomas Saunders, L.R.C.P.Lond., Brixton.
*Yeld, Walter Harry, L.R.C.P.Lond., Stockport.

* Candidates who have not presented themselves under the regulations of the Examining Board.

UNIVERSITY OF EDINBURGH.—The following is the official list of candidates recommended to receive the degree of Doctor of Medicine, and the degrees of Bachelor of Medicine and Master in Surgery, on Aug. 1st:—

Doctor of Medicine.

*Ashdown, H. H., England.
*Ballantyne, J. W., Scotland.
†Bannerman, W. B., Scotland.
*Bentley, A. J. M'D., England.
Brodie, W. Haig, Scotland.
Brown, Harbit, England.
Calvert, Wm. H., Scotland.
Capper, Edmund, England.
‡Caw, J. M., Scotland.
†Combe, Fred. O., England.
†Davidson, R., Scotland.
‡Dickson, G. C., Scotland.
*Douglas, K. M., Scotland.
Field, Oliver, England.
Fiske, Thos. H., England.
‡Forbes, D., Scotland.
†Fraser, Peter, Wales.
Geyzel, C. W. Van, Ceylon.
‡Gordon, Thos., Scotland.
‡Haldane, J. S., Scotland.
‡Harrison, James, England.
‡Haultain, F. W. N., Ceylon.
‡Hayward, C. W., England.
*Helme, Thos. A., England.
Inkster, R. W., Shetland.
‡Jardine, Robt., New Brunswick.
Johnson, O., Sierra Leone.
‡Kellgren, A. L., Sweden.
Kennard, C. P., England.
Lawson, David J., Scotland.
‡Mackay, Wm. A., Scotland.
†Mackness, G. O. C., England.
‡M'Lean, Allan, Australia.
‡Maddox, E. E., England.
Mann, Alfred, England.
‡Miller, Ralph S., Scotland.
Montgomerie, H. M., England.
†Nasmyth, T. Goodall, Scotland.
‡Nisbet, J. Tawse, Scotland.
‡Partridge, Sydney, England.
†Purvis, Geo. C., India.
Rand, Richd. F., England.
Rhodes, Thomas, England.
Roberts, E. T., England.
‡Robinson, Thos. H., England.
‡Scott, W. E. S., England.
‡Scougal, E. F., England.
Smith, Otto Wein, Scotland.
Stephenson, Geo. S., England.
Stirling, Robert, Scotland.
Sykes-Ward, Alfred, England.
‡Sym, Wm. Geo., Scotland.
Thomas, W. Jas., Wales.
*Thomson, H. A., Scotland.
*Tillie, Joseph, Scotland.
Warnock, John, Australia.
*Waterhouse, H. F., England.
Williams, Charles L., England.
†Wood, Geo. E. C., Scotland.

* Those who have obtained Gold Medals for their Dissertations.
† Deemed worthy of competing for the Dissertation Gold Medals.
‡ Commended for their Dissertations.

Bachelor of Medicine and Master in Surgery.

*Adamson, R. O., M.A., Scotland.
†Allison, R. D. R., Scotland.
Anderson, C. A., Scotland.
Anderson, C. M., India.
Aytoun, J. H., Scotland.
Becker, J. E. A. G., England.
Bibby, J. R., England.
Bowes, A. S., England.
Branch, E. W. R., B.A., West India.
Bremner, F. P., Canada.
Bruce, L. C., Scotland.
Brunton, J., Scotland.
Bryson, L. Horner, Scotland.
Buchanan, R. D., Scotland.
Bunting, T. L., England.
Burger, B., Cape Colony.
Burton, T. J., Scotland.
Cadman, E. S. R., England.
Campbell, A. W., Australia.
Carruthers, D. A., England.
Carruthers, S. W., England.
Carr-White, Percy, England.
Carter, A. W., Cape Colony.
Cattley, Robert, England.
Christian, L. de B., England.
Clark, E. Shaw, England.
Clarkson, A., England.
Connor, S. G., Ireland.
Conyers, J. H., Demerara.
Cox, A. Edward, Australia.
*Crerar, John Wm., Scotland.
Critchley, H. G., M.A., England.
Cullen, G. M., Scotland.
Cunningham, James, Scotland.
Dardenne, Henri, Mauritius.

* Passed the examinations with First-class Honours.
† Passed the examinations with Second-class Honours.

Davidson, D. Geo., Scotland.
Day, Fredk. Arthur, Australia.
Dickson, J. R., Trinidad.
Dobie, Herbert, England.
Douglas, John J., Scotland.
Dow, A. G., M.A., Scotland.
Duncan, E. H., M.A., Scotland.
Edwards, John W., Wales.
Elder, Matthew, Scotland.
†Everett, William, England.
*Farquharson, W. Fdk., Scotland.
Fawcett, Edward, England.
Fergusson, Samuel, Scotland.
Frankish, Thomas, England.
Fulton, R. V., New Zealand.
†George, Alfred W., England.
Gibson, C. G., Scotland.
Gibson, J. A., Scotland.
Gibson, W. S., Scotland.
†Gordon, Colin, England.
Gordon, H. Laing, England.
Govan, George, Scotland.
Grindlay, Guy, England.
Haig, P. B., Scotland.
Hardie, John, Scotland.
Hislop, P. Wood, Scotland.
Holmden, F. A. A., England.
Houston, Alex. C., Scotland.
Howell, R. Edw., England.
Hudson, H. C., Cape Colony.
Hughes, Wm. H., England.
Huskie, James, South America.
Iddon, Thos. W., England.
Inglis, H. M'C., B.A., New Zealand. *In absentia.*
Jones, Peter, Wales.
Kunz, H. de D., M.A., Scotland.
*Lackie, James, Scotland.
*Laing, James H. W., M.A., B.Sc., Scotland.
*Langwill, H. C., Scotland.
Lawson, Charles B., Scotland.
Leask, William, Scotland.
Leitch, J. W., B.A., Australia.
Leschen, H. A., Australia.
Lewis, O. Richd., England.
Littlejohn, T. H., Scotland.
Luke, James, Scotland.
Lumsden, John S. S., India.
M'Allum, S. G., India.
Macdonald, John, Scotland.
M'Dougall, Wm. S., Scotland.
M'Gill, J. M., M.A., Scotland.
Mackenzie, R. P., Scotland.
M'Laren, John, Scotland.
*Maclean, Alex., Scotland.
†Maclean, E. John, Wales.
MacLeod, C. G., M.A., Scotland.
MacTier, Wm. B., Scotland.
Mann, F. William, India.
Mansel, Charles J. L., England.
Manuel, W., Scotland.
Maynard, Edw. F., England.
Meek, Wm. O., England.
Milner, E. Arthur, England.
†Monteith, James, Scotland.
Morgan, Thos. L., Wales.
Mortlock, A. Wm., England.
Mursell, Henry T., England.
Nasmyth, Alexander, Scotland.
Nicoll, F. James, New Zealand.
Oliver, Wm., Scotland.
O'Neill, Wm. H. B., Australia.
O'Rourke, William, Ireland.
Owen, Robert G., Wales.
Parham, Wm. M., England.
Parry, Chas. Paton, Wales.
Peddie, Wm. James, Scotland.
*Pilgrim, E. G., Barbadoes.
Polson, William, Scotland.
Poole, Samuel, England.
Prentice, Alex. J., Scotland.
Pretorius, P. G., South Africa.
Purchas, Fredk. A. G., Jamaica.
Reid, P. Macpherson, Australia.
Reitz, F. Wm., Cape Colony.
Richardson, M. Jas., England.
Ritchie, Alex. B., Scotland.
Ritchie, T. M., B.Sc., Scotland.
Robson-Scott, C. G., Scotland.
Ross, F. Wm. F., Jamaica.
Rudolf, Robt. D., Canada.
*Sanders, W. G. W., Scotland.
Scott, J. Alex., England.
Simpson, Wm. Allan, Scotland.
Smith, J. L., M.A., Scotland.
Stalkartt, H. A , India.
Stanley, John D., Ireland.
Starkie, E. G. B., Burmah.
Stechan, Edward, Scotland.
Steven, John Wm., Scotland.
Stevenson, Frank, England.
Stewart, Fk. N., Scotland.
Stewart, Geo. Neil, M.A., D.Sc., Scotland.
Stewart, K. T., Scotland.
Stewart, T. P., M.A., Scotland.
†Sweeten, Benj., Scotland.
Taylor, E. Edm., England.
Thom, Jas. M., Scotland.
Thomas, Evan C., Wales.
Thomson, Alex., Scotland.
Thomson, William E. F., M.A., Scotland.
*Thyne, J. A., Scotland.
Turner, A. Logan, Scotland.
Vandewall, Gilles, Orange Free State.
Vernon, J. J., England.
Wallace, A. John, England.
Watthews, Herbert, England.
Westwood, David, Scotland.
Wheeler, A., Australia.
Whiting, A. John, England.
Wilde, H. Henry, England.
*Wilkinson, George, England.
Wilson, A. F., Scotland.
Wilson, Arthur, Scotland.
Wilson, Geo. R., Scotland.
Wilson, John, M.A., Scotland.
Wilson, J. J., Scotland.
†Wimberley, C. N. C., Scotland.
Wyse, Richard, M.A., Scotland.

* Passed the examinations with First-class Honours.
† Passed the examinations with Second-class Honours.

Prizes and Scholarships. — Ettles Scholarship, Eustace Graham Pilgrim, M.B., C.M.; Beaney Prize, Eustace Graham Pilgrim, M.B., C.M.; Syme Surgical Fellowship, Alexander Eddington, M.B., C.M.; Goodsir Memorial Prize, Herbert F. Waterhouse, M.D.; Murchison Scholarship in Clinical Medicine, Arthur J. Whiting, M.B., C.M.; Buchanan Scholarship in Gynæcology, George Wilkinson, M.B., C.M.; James Scott Scholarship in Midwifery, James Lackie, M.B., C.M.; Gunning Victoria Jubilee Edward Forbes Brize in Zoology, Philip J. White, M.B., C.M.; Gunning Victoria Jubilee Christison Prize in Materia Medica, Joseph Tillie, M.D.; Gunning Victoria Jubilee John Thomson Prize in Pathology, Robert Muir, M.B.; Gunning Victoria Jubilee Alison Prize in Public Health and Medical Jurisprudence, James A. Blair, M.B., C.M.; Gunning Victoria Jubilee Simpson Prize in Obstetrics, John Wm. Ballantyne, M.D.; Dobbie-Smith Gold Medal in Botany, Gustav Mann; Cameron Prize in Therapeutics, Monsieur Pasteur, LL.D.Edin.

UNIVERSITY OF ABERDEEN.—The following candidates received degrees in Medicine and Surgery:—

Degree of M.D.

Beattie, James Walker, M.B., C.M., Sunderland.
Bryce, James, M.B., C.M., Herts.
Carmichael, Jas. Chas. Gordon, M.B., C.M., Surg.-Major, Bengal.
Collie, Frank Lang, M.B., C.M., Aberdeen.
Gordon, Henry Charles, M.B., C.M., Army Medical Service.
Lamb, John Marshall, M.A., M.B., C.M., North Borneo.
Masson, John, M.B., C.M., Lancashire.
Middleton, James Gowing, M.B., C.M., Nice.
Poonen, Eapen, M.B., C.M., B.A. (Madras), India.
Swaine, Charles Lethbridge, M.B., C.M., Army Medical Service.
Wills, Reginald Graham, M.B., C.M., Bath.

Degrees of M.B. and C.M.

Aymer, Chas., Laurencekirk.
Black, George, Auchmill.
Black, R. S., M.A., Inverness.
Counter, F. Wm., Australia.
Cox, E. T., Alton, Hampshire.
Croucher, Francis B., London.
*‡§Cushny, A. R., M.A., Speymouth.
Dale, W. C., M.A., Aberdeen.
†Dean, Geo., M.A., Aberdeen.
Fearnside, C. F., M.A., Aberd.
Fernandez, Harry E., Herts.
Forbes, F. C. F., India.
Fraser, James Beauly.
Gammack, A. P. F., Aberdeen.
†Geddie, D. W., M.A., Banff.
Glennie, J. A. R., Aberdeen.
Goodwin, W., St. Albans.
Grant, James, Tomintoul.
Jones, John E. D., Cawnpore.
Kelly, Francis, Aberdeen.
Kinnear, J. C. M., Montrose.
Lang, Gordon A., Inverness.
Little, Andrew, Kinneff.
Ludlow, Fred. Wm., Germany.
†M'Gillivray, Angus, Inverness.
M'Gowan, W. S., M.A., Aberlour.
M'Hardie, Thos., Morayshire.
M'Rae, Jas., M.A., Mintlaw.
Macdonald, Donald J., Lewis.
Mackay, A. W., M.A., Aberd.
Mackinnon, Nicol, Skye.
Mackinnon, Andrew R., Aberd.
MacFarlane, Neil M., Stanley.
MacRitchie, David, Inverness.
Mann, Chas. F. G., Grantown.
Munro, Wm. E., Dornoch.
Noble, Frederick, Aberdeen.
Philip, Alex. A., Aberdeen.
Philip, James P., New Deer.
Reid, James, Rothiemay.
Reid, Duncan, M.A., Aberdeen.
Reith, Wm. R., M.A., Aberdeen.
Rennet, David, Aberdeen.
*Rose, Alexander, Nairn.
Ross, Henry, Ross-shire.
Saram, Allan M. de, Ceylon.
Scott, Lindley M., M.A., Aberd.
Seneviratne, Henry C., L.M.S., Madras University, Ceylon.
Sheard, Wm. C., Yorkshire.
Silver, George J., Crieff.
Smith, Daniel M., M.A., Aberd.
Souter, John F., Orange, N.S.W.
Stevenson, Edgar, Birkenhead.
Sutherland, W. G., Newcastle-on-Tyne.
Taylor, William C., Aberdeen.
Thomson, William, Montrose.
Thomson, Robert, Nairn.
Trail, John M., Aberdeen.
Troup, James, Aberdeen.
Valentine, John, Montrose.
Watt, J. L., M.A., Stonehaven.

Alexander G. Johnston, Aberdeen, has passed the examinations for the degree of M.B. and C.M., but will not graduate until he has attained the necessary age.

The diploma in Public Health has been conferred on the following candidates:—

Black, R. S., M.A., M.B., C.M.
Duke, A. L., M.B., C.M.
Mason, John W., M.B., C.M.
M'Donald, D. Jas., M.B., C. M.
Stephenson, R. B. T., M.B., C.M.
Webb, E. W., M.D., Surg.-Major.

* Highest academical honours. † Honourable distinction.
‡ The John Murray Medal and Scholarship (awarded to the most distinguished Graduate of the year), Alexander Rose (being *proxime accessit.*)
§ The George Thompson Fellowship, Wm. Leslie Mackenzie, M.A. (being *proxime accessit*).

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS OF EDINBURGH AND FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—**The quarterly examinations in Glasgow for the triple qualification took place in July, with the following results:—**

First Examination.—Of 62 candidates, the following 38 passed—S. E. Jones, Flintshire; R. Owen, Carnarvonshire; R. Foster, Hartlepool; H. J. Cosgrove, Dumfries; G. Crawford, Co. Antrim; A. W. Forrester, Co. Antrim; Mary C. Murdoch, Elgin; Kate E. Pepper, London; Susanna R. Beck, Dorking, Surrey; R. T. Davies, Cerrig of Druidion; A. R. Huxley, Groombridge, Kent; Rosa E. Bale, Westacott, Banstable; J. M. Macmillan, Glenbarr, Argyllshire; Janet M. C. Gray, Bathgate; C. A. Foyl, Liverpool; B. Wiggins, Glengarnock, Ayrshire; J. Devon, Glasgow; J. P. T. Burke, Co. Tipperary; Lucille D. Leslie, Margate; Edith L. Nicholas, Dalston; Emily G. Kent, Rochdale; W. P. Willis, St. Louis, U.S.A.; I. Baldwin, Yorks; Janette F. A. Wallace, Inverness-shire; W. Dill, Cork; Alex. Cumming, Hull; E. Walsh, Limerick; E. R. Pollard, Burnley; R. A. Potterton, Co. Meath; R. Murdoch, Old Cumnock; E. W. F. Kirkman, Dublin; S. J. C. Soloman, Calcutta; W. Bratton, Omagh; D. Riordan, Co. Cork; J. T. Jameson, Pontefland; W. R. Abernethy, Londonderry; D. Donnelly, Kerry; A. P. Stinson, Armagh.

Second Examination.—Of 68 candidates, the following 32 passed:—T. B. Kelly, Galway; D. Doherty, Donegal; P. W. M'Gregor, Glasgow; James Hamilton, Lanark; D. M'Crorie, Kilwinning; Charlotte M. Wheeler, Coppenhall, Crewe; Elizabeth M. Harris, Calne; J. W. Wilkinson, Queen's County; Fred Hall, Bury, Lancashire; A. C. Burrows, Waterford; J. C. Sturdy, Ruswarp; T. E. Hughes, Rhyl; H. M. Bayer, Kilmalleck, County Limerick; Anne E. Wilson, Baltimore, U.S.A.; Harriet M. M. Hughes, London; T. L. Lynch, County Kerry; J. Craig, Glasgow; P. T. James, Glamorgan; S. Martyn, Bombay; C. F. Britto, Goa; R. M. Stokes, South Africa; Frank Nuttall, Bury, Lancashire; A. J. Clark, Forfarshire; G. Macdonald, Kirkintilloch; A. F. Walker, Liverpool; John Lane, County Cork; T. Davies, B.A., Victoria; J. Hodgson, Calne; R. Smith, South Australia; E. Hartley, Blackpool; A. G. Merson, Banffshire; H. C. Darbey, Cradley, Staffordshire.

Final Examination.—Of 49 candidates, the following 24 passed, and were admitted L.R.C.P.E., L.R.C.S.E., and L.F.P. and S.G.:—J. Round, Dudley; J. A. Hamilton, Brighton; Edith E. Ward, London; J. P. Granger, Glasgow; A. M. Ford, Glasgow; R. A. Robinson, county Derry; R. T. Williams, Glamorganshire; F. G. Phillippo, Jamaica; E. R. P. Watkins, Abergavenny; D. H. Stephens, North Shields; R. Steel, Kilbride, Ayrshire; W. C. Lancaster, Dublin; W. P. Lonergan, Glasgow; F. Castle, London; H. F. W. de Montmorency, county Carlow; H. W. Fisher, Liverpool; T. Meiring, Worcester, Cape of Good Hope; P. Campbell, Perthshire; D. Thomson, Newcastle-on-Tyne; F. J. Woods, Banbridge; A. Ross, Edinburgh; J. R. Jones, Festiniog, North Wales; M. R. Callender, South Shields; W. A. P. Ternan, Dundee.

FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—**At the recent sitting of the Board of Examiners for the Fellowship, the following gentleman passed the necessary examination, and was admitted at the August meeting of the Faculty:—**

D. C. G. Bourns, L.R.C.P.Ed., L.R.C.S.I., Surgeon-Major, Army Medical Staff.

At the July sittings of the Examiners for the Licence, the following gentlemen were admitted Licentiates:—

Leonard P. Banks, L.K.Q.C.P.I., Sharnbrook, Bedford; George J. M'Coull, L.R.C.P.Edin., Ovington-on-Tyne.

At the July sittings of the Board of Examiners in Public Health, the following were admitted Diplomates in Public Health:—

Wm. Theodore Hodge, M.K.C.S., Esh, Durham; John S. Rosser, M.B., Morriston, Glamorgan.

At the July sittings of the Dental Board, the following candidates were admitted Licentiates in Dental Surgery:—

Wm. J. Royal, Weymouth; Frank P. Nattruss, Nottingham; William Wallace, M.A., M.B., C.M., Glasgow; Augustus Berkley, Brighton; John G. Biggs, Glasgow; William Geekie, Oxford.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—The following have been admitted Fellows of the College:

Charles B. Gaffney; William G. Hume Henderson, Surgeon-Major, Bombay Army; F. Johnson, Surgeon-Major, Medical Staff; Ignatius O'Farrell, Surgeon-Major, Medical Staff; W. B. Stokes, Surgeon, Medical Staff.

The undermentioned has received the Diploma in Public Health:—

John Henry Griffin.

CONJOINT SCHEME OF THE COLLEGES OF PHYSICIANS AND SURGEONS IN IRELAND.—The following gentlemen have passed the Final Examination:—

Arthur James Carey, Thomas J. Connolly, Samuel A. D'Arcy, William Stephen Dodd, Richard Henry Dreaper, Berkeley F. Falkner, Alfred Aubrey Ferguson, Samuel James McWatty Gilmore, Ernest Sydney Hawthorne, Charles O'Connor Hodgens, Edward Kennedy, James Kearney, George MacKey Laing, John Robert Meeke, Stanley Moore, William Scott McBride, Arthur Saul McCorniskey, Edward Morris O'Connor, Pierce James O'Connor, Eugene Paul Pentony, Daniel Power, Matthew Burke Savage, Daniel Davis Shanahan, Frederick Smith, George Jackson Smith, Robert Millner Smyth, Arthur Edward Sproulle, Frederick William Smith Stone, Ralph Storey, George Langley Tuthill, David Turner.

APOTHECARIES' HALL OF IRELAND.—The following gentlemen have been elected office bearers for the following year:—

Governor.—Charles F. Moore.
Deputy Governor.—Richard G. O'Flaherty.
Council.—P. C. Baxter, E. H. Bolland, Thomas Collins, John Evans, Robert Montgomery, Robert Montgomery Jun., Henry P. Nolan, Edward J. O'Neill, Sir J. B. Owens, Michael J. Moore, John Ryan, James Shaw, George Wyse. Representative on the General Medical Council, Thomas Collins.

INDIAN MEDICAL SERVICE.—The following is a list or Surgeons on probation in Her Majesty's Indian Medical Service who were successful at both the London and Netley Examinations on Aug. 2nd. The final positions of these gentlemen are determined by the marks gained in London added to those gained at Netley, and the combined numbers are accordingly shown in the list which follows:—

	Marks.		Marks.
*Ozzard, F. R.	6265	Jennings, Edgar	5620
†Anderson, A. R. S.	6020	Stiles, T. M.	5473
‡Calvert, J. T.	5705	Hendley, A. G.	5445
Ricketts, W. S. P.	5680	Jenney, G. W.	5441
Moore, C. M.	5655	Hudson, C. T.	5235

* Gained the Herbert Prize of £20, with the Martin Memorial Gold Medal and the Parkes Memorial Bronze Medal, and also the prize in Pathology presented by Sir William Aitken, M.D., F.R.S.

† Gained the Montefiore Medal and prize of 20 guineas.

‡ Gained the Montefiore second prize and the prize in Clinical Medicine presented by Surgeon-General W. C. Maclean, C.B.

MR. C. MEYMOTT TIDY, M.B., Medical Officer of Health for Islington, and Mr. A. Wynter Blyth, Medical Officer of Health for St. Marylebone, both of Lincoln's-inn, have been called to the Bar.

THE DOG MUZZLE.—A special meeting was held recently at the Animals' Institute, to offer the society medal and £10 10*s.*, given by Dr. Gale, the blind electrician, for the best humane muzzle to prevent suffering to dogs. Entries close on Aug. 21st

THE MEDICO-PSYCHOLOGICAL ASSOCIATION.—Dr. Hyslop, assistant medical officer at Bethlem Hospital, has, as a result of the honours examination in Psychological Medicine, gained the Gaskell Prize, given annually by the Medico-Psychological Association.

CAVENDISH COLLEGE, CAMBRIDGE: OPEN SCHOLARSHIPS AND EXHIBITIONS.—Recommended for Clothworkers' Company's Scholarship: W. Abbit, Beaumaris Grammar School. Elected to Scholarships: E. Bland, Devon County School; J. G. Bourne, Merchant Taylors' School. Exhibitions awarded to P. Umney, Merchant Taylors' School; A. Barraclough, North-Eastern County School.

OBSTETRICAL SOCIETY.—The library will be closed from Aug. 19th to Sept. 19th.

PRESENTATION. — Mr. P. G. Philps, M.R.C.S., L.S.A., recently of the Queen's-road, Peckham, has been presented by his patients and friends, on his leaving that neighbourhood, with a handsome chime clock, also two large bronze figures of Mercury and Iris, and a marble clock for his consulting-room.

SMALL-POX IN JUTLAND.—A serious epidemic of small-pox is reported to have broken out at Aalborg, in Jutland, a number of fresh cases having been recorded every day for some time past. The police authorities have in consequence prohibited all public meetings and concerts in the town until further notice.

RABIES.—According to the *London Gazette*, the number of dogs in England reported, during the week ending July 27th, as afflicted with rabies, was seven, six of which were killed, whilst one died. Of the seven diseased animals, two belonged to London, two to Surrey (excluding London), and one to Middlesex (excluding London).

HOSPITAL SATURDAY FUND.—The total net product of the sixteenth annual street collection in the metropolis and the suburbs, which was made under the auspices of the Hospital Saturday Fund on the 13th ult., is now ascertained to be £5080, or £130 more than was realised on Hospital Saturday last year. This is the largest result yet attained, the least being in 1874, when the fund was first formed.

THE SWEATING COMMITTEE'S REPORT.—We understand that at a private sitting recently of the Sweating Committee of the House of Lords, a report was presented by the Earl of Dunraven, the chairman, for the consideration of the Committee. Their lorships were of opinion that the report had been prepared with great promptitude; but having regard to its voluminous and important character, it was resolved to postpone its further consideration until next session.

HYDROPHOBIA.—Three more patients who had been bitten by rabid dogs were sent last week for treatment at the Pasteur Institute in Paris, their expenses being defrayed, either in whole or in part, out of the Mansion House Fund. The patients come respectively from Shepherd's-bush, Portland Island, and Berkshire. Arrangements have been made with an hotel close to the Institute for their accommodation. The Duke of Portland has forwarded a cheque for £25 to the Lord Mayor's Fund.

THE SANITARY INSTITUTE.—The preliminary programme has been issued of the Eleventh Congress, to be held at Worcester from the 24th to the 28th of September, 1889. Congress tickets and all information can be obtained by application to the secretary, E. White Wallis, Esq., F.S.S., Parkes Museum, 74A, Margaret-street, W. The Council invite papers on all subjects relating to health and sanitary science, reserving the right, of course, to refuse unsuitable papers. A short abstract should accompany each paper, the reading of which, if accepted, will be limited to twenty minutes.

THE LATE DR. JOSEPH ROGERS by his will bequeaths £500, free of legacy duty, to trustees, to be set apart as a charitable fund and invested in consols; the dividends to be accumulated during every distinct and successive period of ten years, and at the end of each successive period applied in the payment of the same as a prize to be called the "Rogers' Prize," to the writer of the best essay on the Treatment of the Sick Poor of this Country and the Preservation of the Health of the Poor or either of such subjects. The judges of the merits of such essays to be the President for the time being of the College of Physicians and the Master for the time being of the Apothecaries' Company, or such two or one of them as shall consent to act, and if none of them shall act then the Vice-Chancellor for the time being of the University of London. And Dr. Rogers directs that if at the end of any such period of ten years no such essay should have been written in respect of such period or if, in the opinion of the judges, none of the essays shall merit a prize, then the trustees shall apply the dividends and accumulations for such ten years for the benefit of the Medical Benevolent College or some kindred institution to be selected by the trustees.

BEQUEST. — St. Mark's Ophthalmic Hospital has received £104 6*s.* 8*d.*, under the will of the late Mrs. Selina Miller.

NEW INFECTIOUS DISEASES HOSPITAL.—A special meeting of the Darwen Health Committee was held last week for the purpose of considering what accommodation should be provided for the treatment and isolation of infectious diseases. This subject first received the attention of the committee some months ago, and then they decided to approach the Board of Management of the Blackburn and East Lancashire Infirmary, with a view of seeing if that body were able to allow the Corporation to fit up one of the wards for infectious cases. The Board of Management did not entertain the idea, and consequently the committee decided to erect a substantial infectious diseases hospital, and selected a piece of land as near the town as possible for the purpose.

BEQUESTS AND DONATIONS TO HOSPITALS.—The Warden of King's College Hospital, has received a grant of fifty guineas from the Drapers' Livery Company.—The Secretary of the Glamorganshire and Monmouthshire Infirmary has received a donation of £23 2*s.* 2*d.* from Mr. McCall, of Eastcheap, London.—The recent Cookery Food Exhibition, London, has resulted in a profit of £314 15*s.* 6*d.*, of which the following donations have been apportioned—Great Northern Hospital, Holloway, £100; the French Hospital, Leicester-square, £100; the Hospital for Sick Children, Great Ormond-street, 10 guineas; the Evelina Hospital for Children, Southwark-bridge-road, 10 guineas; and the French Benevolent Society, Poland-street, £37 7*s.*—The Committee of the Hospital for Sick Children, Great Ormond-street, have received towards the Building Fund £1000 from Mr. Junius J. Morgan, and £500 from Sir Savile Crossley, M.P.—By the will of the late Mr. Henry Matthew Clarke, of 25, Mount-street, Grosvenor-square, £1000 is bequeathed to the General Hospital, Bristol.—The Court of Common Council, London, on the 1st inst., made grants to the following hospitals—namely, 200 guineas to the Royal London Ophthalmic Hospital, Moorfields, in aid of the fund for the erection of a new hospital, 100 guineas to the Convalescent Home of the Victoria Hospital for Sick Children, Margate, and 200 guineas to King's College Hospital.—The Treasurer of the Newcastle Infirmary has received from an unknown friend 100 guineas as a thank-offering.—The recent Stanley Gala and Bazaar in aid of the Liverpool Stanley Hospital, yielded, net, the sum of £5168 4*s.*—The late Earl of Malmesbury has bequeathed by his will £100 to the Hants Royal Hospital.

MEDICAL NOTES IN PARLIAMENT.

Poor Law Bill.

In the House of Lords, on Friday, the 2nd inst., Lord Balfour of Burleigh moved the second reading of this Bill, Clause 1 of which extended the legal protection of the guardians in the case of children deserted by their parents to sixteen years of age in the case of boys, and eighteen in that of girls. Clauses 3 and 4 entitled the Metropolitan Asylums Board to receive into their asylums patients suffering from diphtheria, and enabled them to let their ambulances out for hire for the conveyance of fever patients from one place to another.

Cruelty to Children (Prevention) Bill.

On Monday, the 5th, the House went into Committee on this Bill. Lord Dunraven argued against the sub-section prohibiting the employment of children under ten years in theatres and other places of amusement, and denied that there was any cruelty in such employment. He moved, by way of a compromise, a proviso enacting that where it was shown to the satisfaction of a court of summary jurisdiction that proper provision had been made to secure the health and kind treatment of the children, such court might make an order of permission for their employment in such places.—Lord Herschell moved, in addition, that such permission should only extend to children exceeding seven years of age.—On a division, Lord Dunraven's proviso, with Lord Herschell's addition, was adopted by 31 against 24, and the Bill passed through Committee.

Local Government (Scotland) Bill.

On Tuesday, the 6th, this Bill, with a number of additions and amendments, passed through Committee, and the

Universities (Scotland) Bill

was read a second time. The Marquis of Lothian said that he would make a statement in reference to the Bill on going into Committee.

Royal Commission on Army and Navy Administration.

In the House of Commons, on Thursday, the 1st inst., Mr. W. H. Smith, in reply to Sir W. Barttelot, stated that the Royal Commission had already agreed upon a preliminary report on part of the subjects submitted for their consideration. He was unable to hold out any hopes of being able to make any communication on the subject to the House so late in the session. The Commissioners hoped to conclude their final report during the autumn.

Whitewashed Cells and the Eyesight.

Mr. Macneill drew attention to the complaints of several political prisoners in Ireland that their eyes were weakened and influenced by the glare of the whitewash on the walls of their cells, and asked whether the cells of these prisoners could not be covered with a wash of blue or pink instead of the ordinary whitewash. Mr. Balfour, in reply, stated that the prisoners referred to had not complained, nor was there any evidence that their eyesight had become impaired. Replying to further questions, Mr. Balfour said he could hardly believe that the eyesight of gentlemen in prison under the Criminal Law Procedure Act was more delicate than that of persons imprisoned under other Acts, and he had heard of no complaints in the latter class of cases.

The River Lea.

On Friday, the 2nd, Mr. Ritchie, in reply to Sir J. Colomb, stated that the Local Government Board had received a letter from the Poplar Board of Works as to the foul condition of the river Lea, and mentioning the fact that the death of a boy from typhoid fever was attributed to bathing in that river. The letter also stated that the West Ham Corporation allowed their sewage to flow into the river at all states of the tide. He (Mr. Ritchie) would cause inquiries to be made as to that.

Colour Blindness.

In reply to Dr. Farquharson, Sir Michael Hicks-Beach said that the Board of Trade had referred the subject of colour-blindness among seamen to a Departmental Committee which would have scientific assistance in its inquiries. It would not be possible to present the report of the Committee before the end of the session.

Council of India Bill.

The debate on the second reading of this Bill, which was adjourned on July 25th, was resumed. Sir G. Campbell objected to any change being made in the Indian Council without full inquiry into its constitution and working, and moved the rejection of the Bill. Sir Guyer Hunter, in supporting the motion for the rejection of the Bill, urged that the Council ought to be strengthened by the addition of a medical officer of Indian experience. Important statistics affecting the health of 250 millions of people were received from India every year by the India Office, and yet there was not an officer on the Council of India who was able to deal with those statistics. Sir Roper Lethbridge concurred in the suggestion made by Sir G. Hunter, and thought it most desirable that the Council should be strengthened by the addition of a member of the Indian Medical Service. The amendment was negatived, and the Bill read a second time.

Irish Lunacy Service.

On Tuesday, the 6th, Mr. Balfour, replying to Dr. Kenny, stated that one of the inspectors of lunatics in Ireland had retired on superannuation. The question as to the necessity of filling the vacancy is under consideration. There was no foundation for the rumour that it was in contemplation to appoint one of the Scotch assistant Commissioners of Lunacy to an administrative position in the Irish lunacy service.

METROPOLITAN ASYLUMS BOARD.

Return of Patients remaining in the several Fever Hospitals of the Board at midnight on August 6th, 1889.

Hospital.	Beds occupied.						Total accommodation.
	Scarlet fever.	Diphtheria.	Typhus fever.	Enteric fever	Other diseases.	Total.	
Eastern Hospital	222	52	..	24	3	301	400
North-Western Hospital*	111	14	..	..	..	125	435
Western ,,	134	10	..	4	..	148	262
South-Western ,,	..	..	..	..	..	..	402
South-Eastern ,,	255	12	..	15	1	283	462
Northern ,,	..	..	..	..	..	..	480
Totals	722	88	..	43	4	857	2441

* One infant with mother.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ANDERSON, A. R., F.R.C.S., has been appointed Honorary Surgeon to the Nottingham General Hospital, vice James Beddard, F.R.C.S., deceased.

CRAIK, R., M.B. & C.M. Glas., has been appointed Deputy to the Public Vaccinator of the Norton District of the Leek Union.

EAMES, H. MARTYN, L.R.C.P.Edin., L.R.C.S.Edin., S.F.P.S.Glas., has been appointed Clinical Assistant at the Rubery-hill Asylum, near Bromsgrove.

GREENWOOD, E. CLIMSON, L.R.C.P.Lond., M.R.C.S., has been appointed Public Vaccinator for the Parish of Marylebone, vice W. A. Sumner, deceased.

LITTLE, JOHN FLETCHER, M.B.Cantab., M.R.C.P.Lond., has been appointed Honorary Physician to the St. Marylebone General Dispensary.

MACGREGOR, G. R., M.D.Aberd., M.B., has been appointed Medical Officer of Health, Bingley and Keighley Union Districts, vice Roberts, resigned.

SIBLEY, WALTER K., M.B., B.C.Cam., &c., has been appointed House Physician to the Hospital for Consumption, Brompton, vice Dr. Wilkie, resigned.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

CANCER HOSPITAL (FREE), Fulham.—Two Resident House Surgeons for six months. An honorarium at the rate of £50 per annum each, with board and residence.

CHELMSFORD AND MALDON RURAL SANITARY AUTHORITIES.—To the Clerk of the Joint Committee, 96, High-street, Chelmsford.—Medical Officer of Health for the Combined Rural Sanitary Districts of Chelmsford and Maldon, Essex. Salary £600 per annum.

CORNWALL COUNTY ASYLUM, Bodmin.—Junior Assistant Medical Officer. Salary £100 the first year, £110 the second year, and afterwards £120 a year, with board, lodging, washing, and attendance.

SALISBURY INFIRMARY.—House Surgeon. Salary £100 per annum, with board, lodging, and washing.

SWANSEA HOSPITAL.—Resident Medical Officer. Salary £100 per annum, with board, furnished apartments, coals, gas, laundress, and attendance.

THE RURAL SANITARY DISTRICTS OF KENDAL, EAST WARD, AND WEST WARD UNIONS, AND THE URBAN SANITARY DISTRICTS OF KENDAL, AMBLESIDE, APPLEBY, BOWNESS, GRASMERE, AND WINDERMERE, all in the county of Westmoreland, in combination.—Medical Officer of Health. Salary at the rate of £375 per annum, to include travelling and other expenses and disbursements.

VICTORIA INFIRMARY, Glasgow.—Superintendent and Resident Medical Officer. Salary £125 per annum, with apartments and Board.

WEST BROMWICH DISTRICT HOSPITAL, near Birmingham.—Locum Tenens for the House Surgeon for a month or five weeks. Remuneration 5 guineas.

WEST-END HOSPITAL, 73, Welbeck-street, W.—Dispenser. Salary £100 per annum, with increase of £10 per annum for the next two years.

Births, Marriages, and Deaths.

BIRTHS.

GREATHEAD.—On July 6th, at Graham's Town, S. Africa, the wife of J. B. Greathead, M.B.Edin., M.R.C.S. London, of a son.

READ.—On July 5th, at 63, Battersea-rise, Clapham-common, the wife of Mabyn Read, M.D., of a daughter.

STIELL.—On Aug. 1st, at Elms-road, Clapham-common, S.W., the wife of Gavin Stiell, M.B., of a son.

MARRIAGES.

BOYD—TOMS.—On July 25th, at Acton, Stanley Boyd, M.B., F.R.C.S.Eng., Assistant Surgeon to the Charing-cross Hospital, &c., to Florence Nightingale Toms, M.D.

LOWE—RAWSON.—On the 1st inst., at St. Mark's, North Audley-street, W., John Lowe, M.D., of Green-street, Park-lane, to Isabel Mary, youngest daughter of the late George Rawson, of Lanesfield, Clifton, Bristol.

STRUTHERS—ALLEN.—On the 31st ult., at St. Saviour's Church, South Hampstead, James Struthers, jun., M.D., of Leith, to Charlotte Allen, daughter of Joseph Allen, Esq., London.

YOUNG—HAND.—On the 16th ult., on board H.M.S. *Urgent*, William Robert Minchin Young, Surgeon, Royal Navy, eldest son of Colonel W. Young, late 49th and 14th Regiments, to Anna Ethel, eldest daughter of Commodore Henry Hand, of H.M.S. *Urgent* and H.M.'s Dockyard, Port Royal, Jamaica.

DEATHS.

CLUBBE.—On Aug. 4th, at Lowestoft, William Henchman Clubbe, M.R.C.S., aged 63.

FLEMING.—On Aug. 2nd, at Holbrook, Albert Fleming, M.R.C.S.E., M.D., aged 61.

HANBURY.—On Aug. 1st, suddenly, at the residence of D. Macnee, Esq., Ladbroke-square, Notting-hill, George Bobart Hanbury, Surgeon, of Castle-street, Hereford, aged 63.

SILVERLOCK.—On Aug. 5th, suddenly, at Greaves-street, Sheffield, Richard Greenhill Silverlock, M.R.C.S., L.S.A.

STEELE.—On July 18th, at Glyntorr, Somers-road, Reigate, John Sisson Steele, M.R.C.S., L.S.A., in his 80th year.

WINDER.—On July 16th, at Amityville, Long Island, New York, William Guthrie Winder, M.D., a native of Wimbish-cum-Thunderly, Saffron Walden, Essex, and formerly of H.M. 12th Royal Lancers, in his 67th year.

WRIGHT.—On July 29th, at Norfolk House, Norfolk-street, Southsea, Joseph Brampton Wright, M.D., aged 48.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, August 8th, 1889.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Aug. 2	29·96	W.	63	60	123	79	60	..	Cloudy
,, 3	29·86	W.	63	61	89	69	61	·09	Raining
,, 4	30·09	W.	65	60	107	76	58	·18	Bright
,, 5	29·79	S.	62	59	117	72	59	·06	Cloudy
,, 6	29·73	W.	62	56	118	70	55	·23	Cloudy
,, 7	29·96	W.	62	57	119	75	54	·06	Cloudy
,, 8	30·11	W.	60	56	116	73	53	..	Cloudy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "to the Publisher."*

We cannot undertake to return MSS. not used.

THEORY OF FEVER.

Dr. Stachely (Darmstadt) is thanked for his *brochure*, which we are unable to find space to reproduce. His views upon the nature of fever and the treatment of the febrile state are mainly based upon the assumed bacterial cause of the process; for he considers that all the phenomena of the febrile condition are referable to changes induced in the blood by the presence of micro-organisms. The occurrence of the phenomena of fever apart from the presence of microbes would, according to him, be apparently attributable to blood changes similar to those they induce. His views lead him to suggest the early mercurial treatment as germicidal in its effect, followed by mild aperients; the supply of acid to aid the digestive process; the external application of cold, and the use of restorative and stimulant remedies. Apart perhaps from the advocacy of germicides (and not even in that respect is he singular), there is no novelty in his suggestions.

J. W. C.—A good treatise on responsibility in its medico-legal aspects is that of Dr. Napoleone Colajanni, entitled "La Sociologia Criminale," and published at Catania in the present year by Tropea.

M. O. H.—Sanitary leaflets are issued by the National Health Society, 44, Berners-street, London, W.

HEISCH'S TEST FOR SEWAGE.

To the Editors of THE LANCET.

SIRS,—Will you kindly tell me through your columns the particulars of Heisch's test for sewage in water? Also Kjeldahl's nitrogen process? Being such an exile is my excuse for troubling you.

I am, Sirs, yours faithfully,

Jullundur, Punjab, July 12th, 1889. R. H. FIRTH, Surgeon, M.S.

*** Heisch's test is described in Dr. Cornelius Fox's "Sanitary Examinations of Water, Air, and Food" (J. and A. Churchill, 1886), page 24. We do not remember to have seen the Kjeldahl process in a text-book; but full details are given in various recent volumes of "The Analyst." It is simple and, with proper care, very satisfactory.—ED. L.

THE JONES FUND.

THE following additional sums have been received for the appeal made in our issue of July 20th to raise a sum to meet the legal expenses (over £60) of Mr. Jones of Edmonton:—

Sums already acknowledged	£21	18	0	G. Borlase Hicks, Esq. ..	£1	1	0
Lennox Browne, Esq. ..	1	1	0	E. Hooper May, M.D. ..	0	10	6
				H. G. Sworn, Esq... ..	0	5	0

Further subscriptions will be gladly received by Dr. J. W. Hunt, 101, Queen's-road, Dalston, N.E.

DARWINISM AND PHYSIOLOGY.

THE Darwinian theory has exercised the most marked influence on morphology among the biological sciences, while physiology, as one of the same group, bears the fewest and slightest traces of that influence. Dr. J. Steiner, Professor of Physiology in the University of Heidelberg, has set himself to apply to his special subject the Darwinian methods and processes which have borne such striking fruits in morphology. He begins with the nervous system, and his treatise, of which the first and second parts are published, is entitled "Die Functionen des Centralnervensystems und ihre Phylogenese, von Dr. J. Steiner, a.o. Professor der Physiologie an der Universität, Heidelberg. Braunschweig: Friedrich Vieweg und Sohn." His book is hailed by many of his fellow-workers in Germany as a new departure in physiological science, fraught with important results for medicine, theoretical and practical.

J. E. E.—We cannot find room for the letters. But our correspondent seems justified in his complaints against Mr. P—— for seeing his patient independently and without waiting for the consultation which had been arranged. Mr. P—— may have had some excuse for haste and not waiting. But even so, an explanation should have been vouchsafed without delay.

"MEDICAL ADVICE FREE: MEDICINE 2D. PER BOTTLE!"

To the Editors of THE LANCET.

SIRS,—In answer to "M. L. S." in your last issue, allow me to point out that if the distribution of handbills is not touting, I should like to know for what purpose these bills are printed and distributed? That they have been widely distributed is well known to myself and other medical men for some time past. I myself have collected at least twenty amongst my own patients, and I have also observed them under the street knockers. To call this not touting is perfectly ludicrous, and a mere quibble. Your correspondent informs us that this is a dispensary instituted and supported by the lady doctor herself and her private friends; but on turning to the Medical Directory, I find that this "twopenny private dispensary" is placed amongst our public hospitals, and that the lady doctor in question terms herself the "Senior Medical Officer to the Fentiman-road Dispensary, and Resident Medical Officer and Lecturer on Midwifery, Clapham School of Midwifery." *O tempora, O mores!* I wonder what next! If lady practitioners are to be permitted to establish schools of midwifery, and have the privilege of advertising the same at ridiculous fees, the sooner the fact is known and put a stop to the better.

I assure you, this correspondence has not been begun and carried on with a feeling of spite against lady practitioners; but we expect that when they set up practice amongst us they will not entirely set at defiance a little of the honour and dignity of the profession.

I remain, Sirs, yours faithfully,

Aug. 4th, 1889. PRO BONO PUBLICO.

MEDICAL ADVERTISEMENT BY A GRADUATE OF THE LONDON UNIVERSITY.

THE following is contained in a handbill:—

"Jalap in Jam: or Whimsical Wisdom. Mens & Corpus, Limited, or 'No Premium Required': A quaint and humorous 'Guide to Health,' pleasant to read, and useful to ponder. The cheapest 'Life Insurance Policy' ever yet introduced. By F. J. Money, M.D. (Lond.), &c. Published by the Author, at 10½, Ironmonger-lane, Cheapside, E.C., daily (except Saturday), from 12.30 to 4. Post Free Six Stamps. Order of all Booksellers. Consultation and Medicine, 2*s.* 6*d.*"

LIFE IN TASMANIA.

To the Editors of THE LANCET.

SIRS,—I should be obliged if any of your correspondents could inform me of the conditions of life in Tasmania, and if there is an opening for practice in any part of the island.—I am, Sirs, yours faithfully,

Aug. 7th, 1889. EMIGRANT.

ANOTHER MEDICAL ELECTRICIAN SUPPORTED BY A QUALIFIED MEDICAL MAN.

ONE Edward Moross, who advertises his miraculous cures as a medical electrician in the *Daily Telegraph*, finding Manchester too narrow for him, has come to London. Electricity is his sheet-anchor. But even that agent has its limits; and for the greater success of catering for those who believe in a properly qualified medical man he has "associated himself with Dr. Swyer, and they practise together as

Edward Moross and Dr. Swyer, 17, Euston-square
(near Euston Station), London."

It would be satisfactory if the bodies whose diploma is held by Dr. Swyer, or the Medical Council, would inform him that this use of medical qualifications is inconsistent equally with public advantage and professional dignity. For a qualified medical man to be advertised with, and play second fiddle to, and support an electrical quack is worse than giving the care of a branch practice to an unqualified man.

Dr. Allwright.—If possible, next week. The article, however, has extended to a greater length than we anticipated.

TREATMENT OF HYDROCELE BY SOLUTION OF CORROSIVE SUBLIMATE.

LETTERS having been received from correspondents inquiring the meaning of "a 1500 per cent. solution," mentioned in Mr. Barnard's letter inserted in our impression of the 20th ult., page 147, we referred the query to the writer, and the following is his reply:—

"SIRS,—By a 1500 solution I meant about ⅔ grain of corrosive sublimate in an ounce of water. Any chemist, if asked a 1500 solution of corrosive sublimate, will dispense the required injection.

"I remain, Sirs, yours truly,

"B. BARNARD, M.B., &c.

"Victoria-street, Alderney, July 31st, 1889."

H. L.—The best edition of the works of Dr. John Freind, the learned Court physician and historian of medicine, who flourished in the early years of last century, is that superintended by the medical scholar Wigan, well known for his labours on the text and interpretation of Aretaeus. Its full title is:—"Johannes Freind, M.D., Serenissimae Reginae Carolinae Archiatri, Opera Omnia Medica. Londini: Typis Johannis Wright. MDCCXXXIII." For this edition Wigan translated from English into flowing Latinity Dr. Freind's "History of Medicine," which is better known, particularly on the Continent, in this revised Latin version. The "Opera Omnia" fill one entire volume folio, of which there is a fine copy in the Library of Trinity College, Cambridge.

Cyclops.—Yes.

AN APPEAL.

To the Editors of THE LANCET.

SIRS,—Mr. George Couper Sanders, M.R.C.S., L.S.A., practised in the Island of Jamaica about seventeen years ago. About the year 1874 his wife died, and about two years later he left the island, and no one there has since heard of him. He left a daughter aged four years totally unprovided for. A gentleman on whom she had no claim has kept her until now, when he is no longer able to. An aunt (not in good circumstances) would take the girl, if we can get the necessary money to provide an outfit and pay her passage to England. Will you kindly lend your aid in trying to get the necessary £50 or so for the orphan of one of our professional brethren. I shall be glad to receive and acknowledge any contribution and answer any questions.

I am, Sirs, yours faithfully,

A. W. THORBURN STEER, M.R.C.S., L.R.C.P.,
Government Medical Officer, Jamaica.

Puslinch, Yealmpton, Plymouth, Aug. 2nd, 1889.

DOCTORS AND PHARMACISTS IN MEXICO.

La Vox de Hipocrates, a Mexican periodical, complains bitterly of a piece of legislation which has just been enacted by the important State of Yucatan. Henceforth doctors of medicine and surgery will be permitted to open pharmacies without giving them in charge to registered pharmacists—that is to say, medical men may keep chemists' shops with or without the help of unqualified assistants. Unfortunately, something like this is occasionally done in this country, where open surgeries are sometimes left in the charge of the proprietor's wife, or of some much less competent and more irresponsible person.

A CAUTION.

To the Editors of THE LANCET.

SIRS,—I have a son named James Henry Clark, a medical man of eminence at St. Elizabeth, Jamaica, who holds a Government appointment there, and has held the appointment for about twenty years. I have recently been informed that some man over here is using my son's name and referring to my son's medical education and qualifications, and thus endeavouring to obtain money from the benevolent public. I therefore ask you to allow me to state in the columns of your valuable journal that my son is at present in a good position, and has never required, and I trust never will require, to ask for pecuniary help, and that if any person should be applied to for assistance in the name of my son he will promptly hand over to the police the person so applying, or report the matter to my solicitor, Mr. Basil E. Greenfield, 31, Nicholas-lane, E.C. I am, Sirs, yours faithfully,

Vartry-road, Clapton, N. THOMAS HENRY CLARK.

MEDICAL EVIDENCE IN FINLAND.

A CASE of appeal has just been decided by the Appellate Court of Finland, which upheld the judgment of an inferior court where a medical man refused to give evidence in a case where the interested parties were his patients, considering that he was bound by the oath he took on receiving his licence to practise not to reveal circumstances which had been confided to him by those under his care. For this refusal he was fined. It seems therefore that the obligation to maintain professional secrecy is not recognised in Finnish courts of law any more than it is in this country. As to this matter the law varies in different countries, that of France, for example, recognising and enforcing secrecy under all circumstances.

M.R.C.S.'s (Dovercourt) letter has been mislaid. Will our correspondent kindly repeat his question?

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Hermann Weber, London; Dr. A. Chauveau, Paris; Dr. Fletcher Beach, Dartford; Sir Dyce Duckworth, London; Dr. Hare, London; Dr. Vincent Harris, London; Sir T. Longmore, Woolstone; Mr. Wharton Jones, Ventnor; Dr. Cullingworth, London; Surgeon-General Johnston, Northwich; Mr. T. B. Slade, London; Dr. Holman, London; Mr. H. Johnston; Prof. Walley, Edinburgh; Dr. Munro, Jarrow; Mr. E. Moore, Birmingham; Mr. Whittard, London; Mr. Sandell, London; Mr. Flather, Cambridge; Mr. Barnard, Alderney; Messrs. Ferris and Co., Bristol; Dr. E. May, Hanwell; Dr. Page, Paris; Mr. Baldwin Latham, London; Mr. T. H. Clark, Clapton; Dr. W. Dale, King's Lynn; Mr. Steed, Jamaica; Mr. W. B. Cosens, Taunton; Inspector-General Lawson; Dr. Begg, Hankow; Dr. Pedley, Rangoon; Dr. E. P. Manby, Brighton; Mr. Marsden, Bury; Mr. Wild, London; Dr. W. J. Collins, London; Mr. C. H. Leet, Seaforth; Dr. Allwright, Brighton; Mr. R. H. Frith, Jullundur; Mr. C. J. Bond, Leicester; Mr. Milne, Kendal; Dr. Lediard, Carlisle; Dr. F. F. Bond, Rastrick; Dr. John Stokes, Rotherham; Dr. J. Oliver, London; Mr. Holberton, Brierley Hill; Dr. J. C. McVail, Kilmarnock; Messrs. Tate and Son, North Shields; Dr. Humphreys, Northamptonshire; Dr. A. B. Johnson, New York; Lord Sandhurst, London; Mr. R. Banks, London; Messrs. Lee and Martin, Birmingham; Mr. T. C. Turner, London; Messrs. Rankin and Bonland, Kilmarnock; Dr. R. Savage, London; Dr. F. Ewens, Highgate; Dr. Lyle, Bromsgrove; Mr. Corke, Baschurch; Mr. Field, London; Mr. Morris, Swansea; Mr. Forsyth, Glasgow; Mr. Ryan, London; Mr. Inglis, Belfast; Dr. Buchanan, Glasgow; Mr. Bennett, Liverpool; Mr. Husband, Yorks; Mr. Bissett, Glasgow; Mr. Scott, Manchester; Mr. Clarke, Preston; Dr. Kuelm, Nicaragua; Mr. Bartlett, Cheltenham; Major L. W. Pead, Dulwich; A Subscriber; M. M. M.; Delta, London; M., London; Sabac, London; Sigma, London; Pro bono Publico; Sittaford, London; Pearson, London; West Herts Infirmary; A., London; Victoria, Suffolk; Cyclops; Cornwall County Asylum; An Englishwoman; Fever Hospital, Manchester; Lady Superintendent, School of Massage.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Hellier, Leeds; Mrs. Ernst, London; Mr. Stenhouse, Glasgow; Messrs. Cox Bros., West Somerset; Mr. Murchison, Stockton; Messrs. Bentley and Son, London; Mr. Tunmer, Harrogate; Messrs. Robinson and Sons, Chesterfield; Rev. T. C. Fry, Maidstone; Mr. Hyatt, Shepton Mallet; Mr. Jones, Oswestry; Mr. Furley, London; Messrs. Benson and Son, London; Mr. McLeagh, Bewdley; Messrs. Richards and Co., London; Mr. Hay, Hull; Mr. Walsh, Mallow; Messrs. Woolley and Sons, Manchester; Mr. Anderson, Glasgow; Messrs. Battley and Watts, London; Dr. Taylor, Nottingham; Messrs. Bullock and Co., London; Mr. Banff, London; Mr. Malone, Dublin; Dr. Pain, Isle of Wight; Mr. Richards, Strand; Mr. Baly, Staffs.; Messrs. Haigh and Son, Liverpool; Mr. Boyd, Bournemouth; Messrs. McKeever and Son, Cumberland; Mr. Sargent, Sussex; Mr. Heywood, Manchester; Mrs. Sheldon, London; Mr. Bryden, Yorks; Mr. Butcher, Birkenhead; Dr. McLean, Herts; Mr. Owen, Beaumaris; Mr. James, Carnarvon; Mr. Pearson, Germany; Mr. Laurence, Suffolk; Mr. Lalor, Sussex; Mr. Stone, Reigate; Dr. Murrell, London; Mr. Crowther, Birmingham; Mr. Hamar, Kent; Dr. Read, Clapham; Mrs. Hyde, Portsmouth; Mr. Hutchison, Oxon.; Mr. Wale, Devon; Mr. Andrew, London; Miss Tomlett, London; Rev. Tooth, Croydon; Mr. Croke, Beverley; Messrs. Hooper and Co., London; Physician, Kensington; S. W., London; Alpha, Kensington; X. Y. Z., London; University College, Bristol; B., Sittingbourne; M.B., Manchester; Burlington Carriage Co., London; A. B., London; Asylum, Staffs.; Hamilton Association, London; Hall, London; Omega, Brighton; Workman, London; Delta, Edinburgh; H., Brighton; Q.C., London; A. B. C., London; Licentiate, London; M. E. D., London; A. B., Westgate-on-Sea; Urgent, London; L.R.C.P., Wells; T., Oldham; Forceps, London; Galen, London; Valetudo, Bath; Kappa, London; Danby, Southampton; Clifford, Bath; Y. Z., London; X. L., London; Zylol, London; Doctor, London; Practice, Essex.

Sunderland Herald and Daily Post, Mining Journal, Surrey Advertiser, Eccles and Patricroft Journal, Darlington and Stockton Times, North Star (Darlington), Hertfordshire Mercury, Weekly Free Press and Aberdeen Herald, Reading Mercury, Liverpool Courier, Liverpool Mercury, Midland Observer, &c., have been received.

Medical Diary for the ensuing Week.

Monday, August 12.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, daily at 10 A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
ST. MARK'S HOSPITAL.—Operations, 2.30 P.M.; Tuesday, 2.30 P.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

Tuesday, August 13.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same days, 2 P.M.

Wednesday, August 14.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
ST. THOMAS'S HOSPITAL.—Operations 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M. Thursday & Saturday, same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M.; Saturday, 1 P.M.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical Visits on Wednesday and Saturday at 9.15 A.M.

Thursday, August 15.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

Friday, August 16.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, August 17.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

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Quarter Page	1 10 0
Half a Page	2 15 0
An Entire Page	5 5 0

The Publisher cannot hold himself responsible for the return of testimonials, &c., sent to the office in reply to advertisements; copies only should be forwarded.

NOTICE.—Advertisers are requested to observe that it is contrary to the Postal Regulations to receive at Post Offices letters addressed to initials only.

An original and novel feature of "THE LANCET General Advertiser" is a special Index to Advertisements on page 2, which not only affords a ready means of finding any notice, but is in itself an *additional* advertisement.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

Answers are now received at this Office, by special arrangement, to advertisements appearing in THE LANCET.

Terms for Serial Insertions may be obtained of the Publisher, to whom all letters relating to Advertisements or Subscriptions should be addressed.

Advertisements are now received at all Messrs. W. H. Smith and Son's Railway Bookstalls throughout the United Kingdom and all other Advertising Agents.

Agent for the Advertisement Department in France—J. ASTIER, 66, Rue Caumartin, Paris.